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ABSTRACT

This book reports national data on trends and participation in continuing higher education. Statistics in the book have been derived from data collected by the authors, as well as by governmental and private organizations. The book is organized in six sections that cover the following topics: factors contributing to the growth of continuing higher education; student characteristics; financing study; preparing for the global economy; building a literate and an informed society; and joining the information age. A glossary defines 40 terms. Some of the trends profiled in the book include the following: (1) part time students are the fastest growing population in higher education; (2) more Americans are college educated than ever before; (3) nearly half of the adult population participates annually in continuing education activities; (4) part-time students are primarily women; (5) nearly half of all minority college students enroll part time; (6) most employers finance college-level studies; (7) many states mandate continuing education for professionals; (8) the global economy creates more travel to and from foreign countries; (9) continuing education responds to increased demand for bilingual teachers; (10) masters of liberal studies programs are multiplying; (11) programs for adults of retirement age are popular and numerous; (12) every home has access to instructional technology; (13) use of the Internet is growing exponentially; and (14) distance technology-based courses are becoming more popular in universities. (KC)

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LIFELONG LEARNING TRENDS

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nucea NATIONAL UNIVERSITY CONTINUING EDUCATION ASSOCIATION

N U C E A Founded in 1915, the National University Continuing Education Association promotes expanded opportunities and high-quality continuing higher education. Association members include accredited, degree-granting higher education institutions and comparable non-profit organizations dedicated to postsecondary continuing higher education.

The Association collects and analyzes data to support its public policy activities and to assist its member institutions' planning efforts. The Association conducts three national surveys each year. In addition, NUCEA uses secondary data collected by public and private agencies to produce statistical analyses of relevance to the continuing higher education field.

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LIFELONG LEARNING TRENDS • fourth edition
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FOREWORD

Lifelong Learning Trends represents an effort to gather in a single publication national data on trends and participation in continuing higher education. The charts contained in this publication have been derived from data collected by NUCEA, as well as by governmental and private organizations. This is the fourth edition of *Trends*, a book originally published by the Association in 1990.

Several of the charts contained in this publication are based on NUCEA surveys or have been adapted from *NUCEA News*, the Association's monthly newsletter. Information has been revised and supplemented whenever possible with the most current information available.

J. Noah Brown, NUCEA's director of governmental relations and public affairs, developed the contents of this publication and served as its editor.

Kay J. Kohl
Executive Director
April 1996

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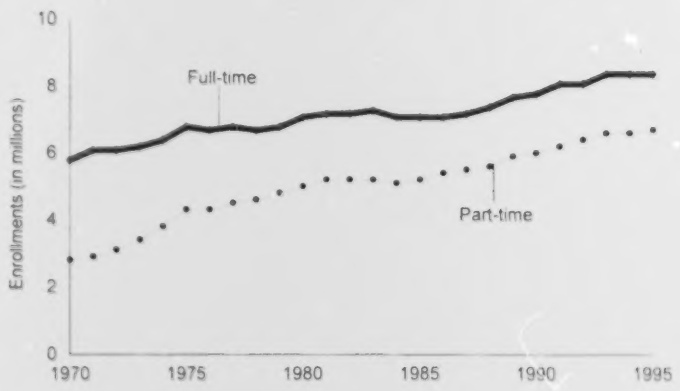
FACTORS CONTRIBUTING TO GROWTH

part-time students are the fastest growing population in higher education

Part-time students—those who take less than 75 percent of what a given institution considers a full-time credit load—represent the fastest growing population in higher education. This increase in the part-time cohort has fueled the growth of continuing higher education programs nationwide, as institutions have adapted to meet the needs of these students. Now nearly half of all students enrolled at all levels in higher education attend part-time.

- Between 1970 and 1995, the number of part-time student enrollments in American colleges and universities more than doubled, growing from just under 3 million to an estimated 6.7 million.
- One-third of all undergraduate-level and two-thirds of master's-level enrollments are part-time.
- Between 1970 and 1995, part-time enrollments increased by 139 percent, compared with 44 percent for full-time enrollments.
- Part-time enrollments have helped keep higher education enrollments growing, even though the traditional college-age population (18-to-24-years-old) decreased markedly between 1975 and 1994.

total student enrollments by attendance status: fall 1970-1995 (projected)



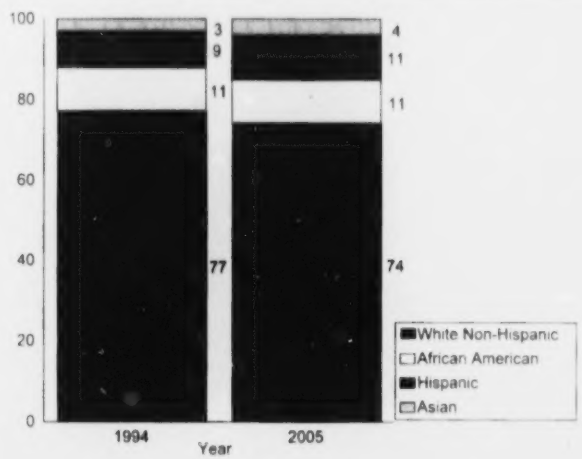
Source: National Center for Education Statistics, *Projections of Education Statistics to 2005*, NCES 95-169

composition of U.S. civilian labor force will change dramatically by the year 2005 . . .

Demographic shifts occurring in the civilian population will change dramatically the composition and age-distribution of the labor force by the year 2005. These shifts result from varying birth rates in population groups, changing immigration patterns, longer career spans and increasing numbers of women entering the workforce to supplement family incomes or support single-income households.

- In 1994, white, non-Hispanics accounted for 77 percent of the U.S. civilian labor force. In the same year, African Americans accounted for 11 percent of the labor force; Hispanics 9 percent; and Asians the remaining 3 percent.
- By the year 2005, however, demographic shifts will reshape the American labor force. Minorities will capture a larger share of the jobs, while the percentage of white, non-Hispanic workers will fall to 74 percent of the total.
- By the year 2005, the number of Hispanic workers will equal the number of African American workers, while Asian workers will constitute 4 percent of the labor force.
- Women will account for 62 percent of the new entrants into the labor force by 2005.

composition of the labor force by race/ethnicity: 1994 and projected 2005

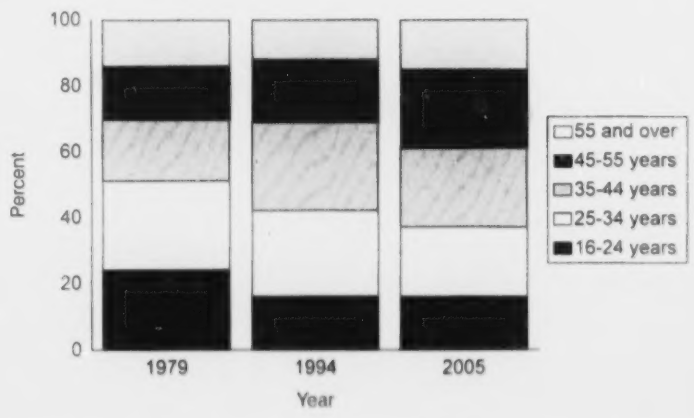


Source: U.S. Bureau of Labor Statistics, *Occupational Outlook Quarterly*, Fall 1995

. . . but number of new entrants will be insufficient for the economy's needs

- In 1979, workers 16-to-34-years-old comprised half of the U.S. civilian labor force. By 2005, however, this age cohort will be eclipsed by the 35-to-55 age cohort, which will account for 63 percent of the labor force.
- With labor force growth slowing down between now and the year 2005, those already in the labor force will bear the brunt of adapting to the needs of a highly competitive global economy characterized by rapid technological change.
- An older labor force will require new investments. Many employers now consider employee education an essential cost of doing business in a competitive economy. Also, many adults understand that continuous learning is essential to their employment future.
- With the nature of the American economy changing, knowledge is becoming more important. Developing human resources is the key to remaining globally competitive, which implies the acquisition of new knowledge.

composition of the labor force by selected age cohorts: 1979, 1994 and projected to 2005



Source: U.S. Bureau of Labor Statistics, *Occupational Outlook Quarterly*, Fall 1995

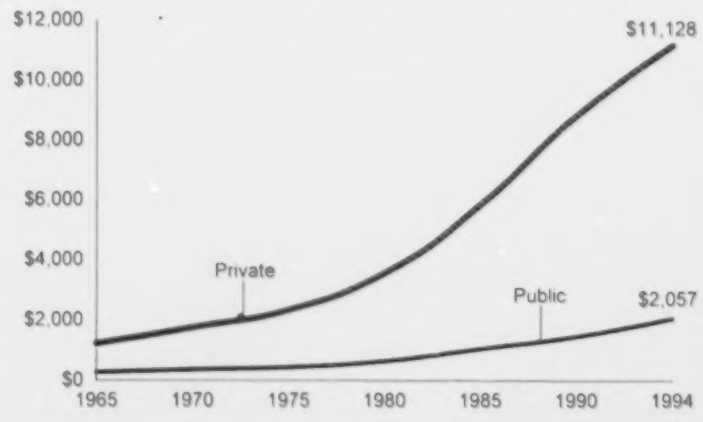
tuition costs continue to outpace inflation

Average annual undergraduate tuition and fees at American colleges and universities have risen steadily since 1965. Over the past 12 years, the average college tuition has risen faster than the annual inflation rate. The increases have been highest at private institutions.

Rising tuition costs and the decline in the purchasing power of student financial assistance have contributed to the increased numbers of students pursuing postsecondary education on a part-time basis.

- One-third of part-time students work full-time and attend classes during the morning or evening hours.
- Increases in tuition costs strain part-time students because of the scarcity of federal, state and institutional financial-aid resources available to them.
- The majority of part-time students attend public two-year and four-year institutions, where tuition and fees are generally lower than those at private institutions.
- Many part-time students come from low-income families, and although they qualify for Pell Grants and other student-aid programs, they find the available monies are not sufficient to permit attendance on a full-time basis.

average annual undergraduate in-state tuition and fees in current dollars by institution type: 1965 to 1994



Source: National Center for Education Statistics, *Digest of Education Statistics: 1995*, NCES 95-029

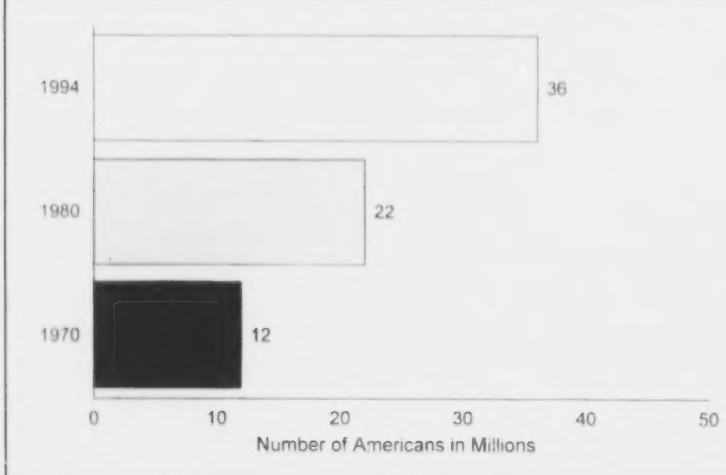
more Americans are college-educated than ever before

The dramatic rise in Americans' levels of educational attainment during the past two decades is apparent in the number of college graduates in the U.S. population.

The increase in the educational attainment of Americans is helping to spur the enrollments of part-time students at the pre- and post-baccalaureate levels. Research shows that there is a consistent relationship between level of educational attainment and the propensity to pursue continuing education opportunities during one's lifetime.

- In 1970, only 12 million Americans aged 25 years and older had a college degree. Two-and-one-half decades later, 36 million had college degrees.
- 42 percent of pre-baccalaureate students attend part-time, and an estimated 62 percent of master's degree candidates are part-time students.
- It is estimated that three out of four jobs today require some postsecondary education.

U.S. population aged 25 and older with college degrees: 1970, 1980 and 1994



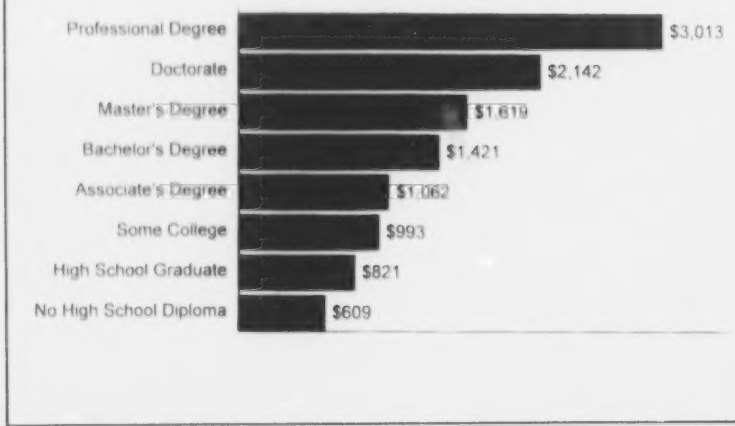
Source: National Center for Education Statistics, *Digest of Education Statistics* 1995, NCES 95-029

continuous learning results in higher earnings

Continuing education beyond high school is one of the smartest financial investments a person can make. Full-time, full-year workers who continue their education beyond high school earn higher salaries than those without postsecondary education. And this income gap continues to expand over a lifetime.

- In 1992, the mean annual earnings of college graduates were $32,624, more than twice those of high school graduates.
- Estimated over an individual's lifetime, a high school graduate can expect to earn $812,000 in current dollars versus $1,421,000 accrued by a college graduate.

estimated career earnings by level of education: 1992
(in thousands of dollars)



Source: U.S. Census Bureau, *Statistical Brief*, 94-147

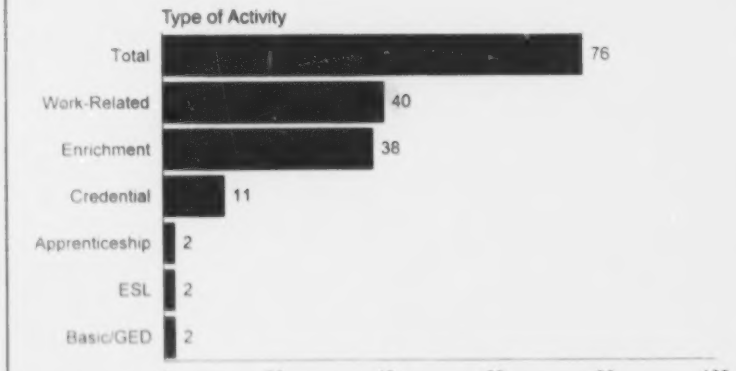
nearly half of adult population participates annually in continuing education activities

During the course of a year, some 40 percent of Americans aged 16 and older participate in one or more continuing education activities. Such activities may include the following: English-as-a-second-language courses; adult basic education (including GED preparation courses); college and university-based credential programs; apprenticeship and/or on-the-job training; work-related education courses; and personal development courses.

The percentage of adults pursuing education of some kind grew 25 percent between 1991 and 1995. Most adults focus on one type of continuing education, with work-related continuing education attracting the most people. Given that the number of Americans aged 25 and older with a college degree has climbed to 36 million, it can be anticipated that the demand for continuing education will continue to increase. Fifty-eight percent of adults who participated in continuing education in 1995 had at least a college degree, almost twice the number of adults with no postsecondary credential.

- Overall, 76 million adults aged 16 and older participated in some form of continuing education during 1995.
- Forty million adults took work-related courses.
- Some 38 million adults pursued personal development or enrichment courses.
- Eleven million adults took college and university-based credential courses.

adults 16 and older participating in diverse types of continuing education: 1995



Source: National Center for Education Statistics, *National Household Education Survey 1995*, 95-825.

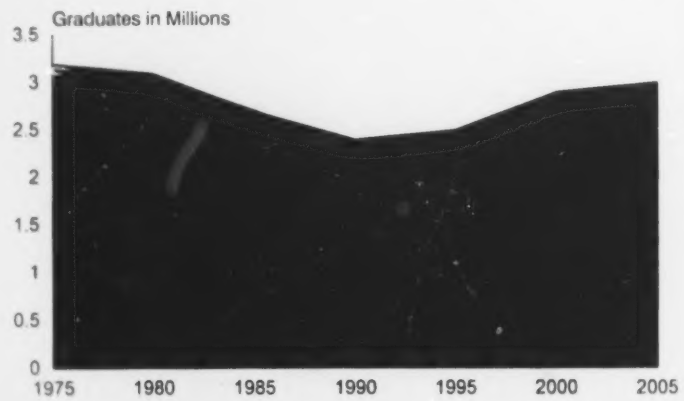
pool of traditional college-age students projected to climb significantly

Higher education enrollments increased steadily between 1975 and 1994, despite a significant decline in the college-age population (ages 18-to-24). Two major factors accounted for the expansion of higher education enrollments. First, a greater percentage of high-school graduates went on to college than at any time in the past. Second, the number of older, part-time students enrolling in higher education increased dramatically during the same period.

The number of high school graduates each year is projected to increase through the year 2005, reaching an annual level equivalent to 1975.

- The number of high school graduates declined each year since 1975. Beginning in 1994, however, the number of students graduating from high schools nationwide began to increase and is projected to reach more than 3 million by 2005.
- Between 1975 and 1990, however, the number of high school graduates dropped from 3.1 million to 2.6 million per year.
- The number of high school graduates in 1995 was estimated to be less than 2.4 million.

total high school graduates: 1975 projected to 2005



Source: National Center for Education Statistics; *Projections of Education Statistics to 2005*, NCES 95-169

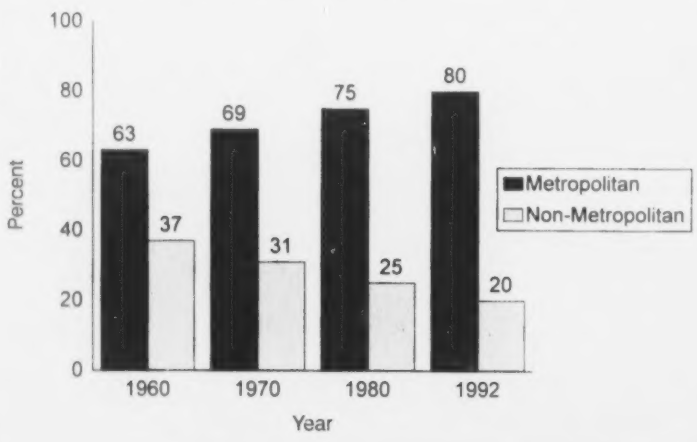
the urbanization of America

More Americans live in metropolitan areas than ever before. Population is measured in terms of standard metropolitan statistical areas (SMSA), or areas that contain at least one central city of 50,000 inhabitants or more.

The population shift from non-metropolitan areas to larger towns and cities has prompted many colleges and universities to develop off-campus learning centers in downtown and suburban locations, closer to prospective adult students, and to offer on-site education to employees in the workplace. The increasing centralization of new jobs and workers in metropolitan areas has contributed to the growth of continuing education programs, as individuals retrain or prepare for newly created jobs. Jobs in the service sector are most affected by rapid growth of technologies and specialized knowledge areas.

- In 1960, 63 percent of the nation's population lived in metropolitan areas as defined by the U.S. Bureau of the Census.
- By 1992, that figure had risen to nearly 80 percent.
- Less than one percent of the population was employed in agriculture, forestry and fisheries in 1994.

U.S. civilian population by selected area: 1960, 1970, 1980 and 1992



Source: U.S. Bureau of the Census, *Statistical Abstract of the U.S.* (1995 Edition), table no. 40

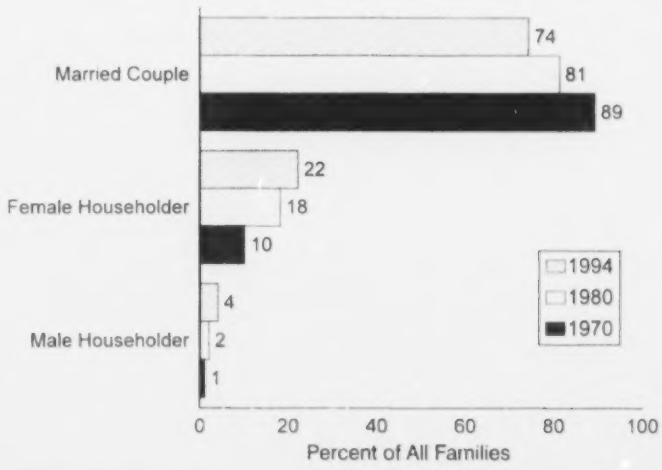
increasing numbers of families are headed by single women

The American family has changed substantially since 1970. More families are headed by single parents, threatening to replace the nuclear family as the norm. Unmarried teenagers head many of these families. Other single-parent families are headed by divorced or widowed parents. Almost 85 percent of single-parent families are now headed by women.

Single-parent families are often caught in a "double-bind" situation. These men and women must work to support families, yet a lack of education prevents them from qualifying for much more than minimum-wage jobs. This places some single-parent families at or below the poverty line. For working fathers and mothers with heavy family responsibilities, part-time study is often their only chance to prepare for higher paying jobs that promise a measure of economic security.

- Single-parent families account for 31 percent of all families with children under 18 years of age, more than twice the percentage in 1970.
- Twenty-two percent of all families are headed by women; male single-head-of-households account for 4 percent.
- Among whites, 25 percent of all families are headed by single parents; among African Americans, about 65 percent; and among Hispanics, 36 percent.

percentage of U.S. families by type: 1970, 1980, and 1994



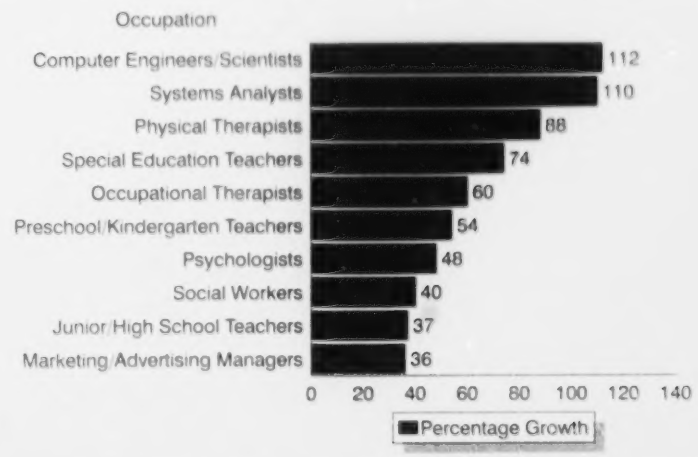
Source: U.S. Bureau of the Census, *Current Population Reports*, series P-20, no. 477

job growth is fastest in occupational groups requiring more education

It is estimated that three out of four jobs require some postsecondary education. Of the new jobs being created by the year 2005, managerial, professional and technical occupations will be among the fastest growing job categories, accounting for 28 percent of new job openings. These three occupational groups also have the highest proportion of workers with a college degree. These three groups also earn on average, much higher salaries than do virtually all other occupational categories.

Those people already in the workforce, as well as new entrants, will need higher levels of education and training in order to compete effectively. Of the 20 fastest growing occupations requiring at least a college degree, more than half will be in the health services or computer industries.

fastest growing occupations requiring at least a college degree between 1992 and 2005



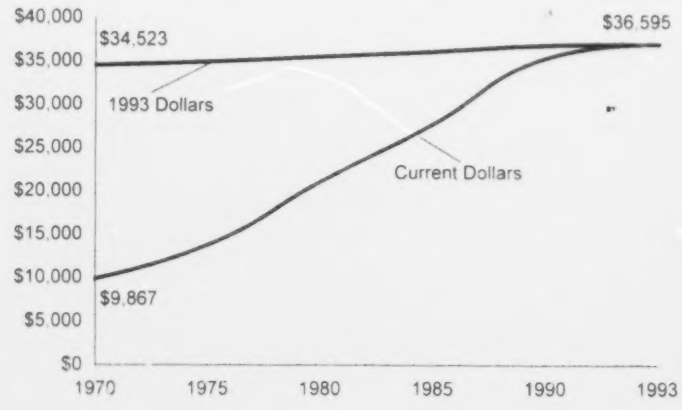
Source: U.S. Bureau of Labor Statistics, *Occupational Outlook Quarterly*, Vol. 37 No. 3

real family income has grown only slightly since 1970

While the average American family has seen its annual income triple since 1970, the figures are misleading. Median family income rose from $9,867 per year in 1970 to $36,959 in 1993. But when readjusted for inflation over the same period, median family income in 1970 was the equivalent of $34,523 in 1993 dollars. Thus in terms of real purchasing power, the average family is only $2,436 ahead of the average family in 1970.

The virtual non-growth in median family income since 1970 has resulted in a financial squeeze for many families as health care, housing costs and college tuition and fees have grown faster than the rate of inflation. As these costs continue to rise, part-time study has become the only feasible option for many adults seeking to upgrade their skills and prepare for higher paying jobs.

changes in annual median family income in current versus 1993 dollars: 1970 to 1993



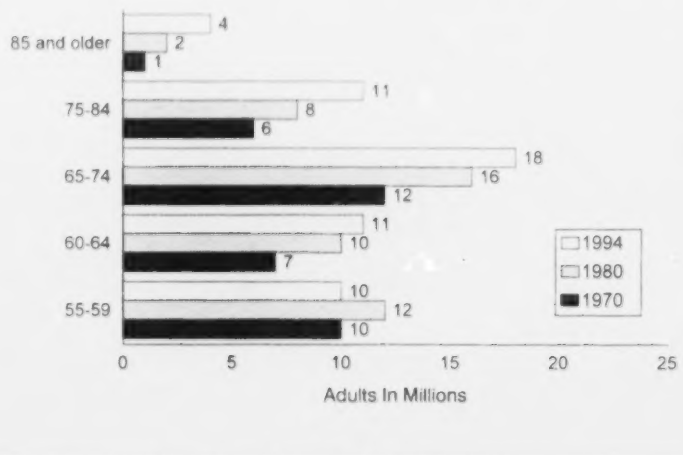
Source: U.S. Bureau of the Census, *Current Population Reports*, series P-60, no. 188

older adult population is expanding rapidly

In 1994, nearly 54 million Americans were aged 55 or older. The number of older adults has increased markedly since 1960. Almost 21 million more adults aged 55 and older have been added to the Census rolls since 1960. Projections indicate that these trends will continue into the next century. As the "baby boomers" age, the ranks of the 55-and-older population are expected to continue to increase rapidly. This growth is affecting profoundly every aspect of American society, from the type of products being sold to how people spend their leisure time.

As older adults work longer and postpone retirement, many seek continuing education in order to stay abreast of new technologies and developments within professional disciplines. Age 65 is no longer seen as the "normal" retirement age, and in many fields age discrimination is illegal. For those who do retire, retirement income, such as Social Security, personal savings and retirement funds, may help many to pursue learning in retirement programs and other educational pursuits.

U.S. resident population by selected age cohorts: 1970, 1980 and 1994



Source: U.S. Bureau of the Census, *Current Population Reports*, P-25, no. 1095

STUDENT CHARACTERISTICS

22

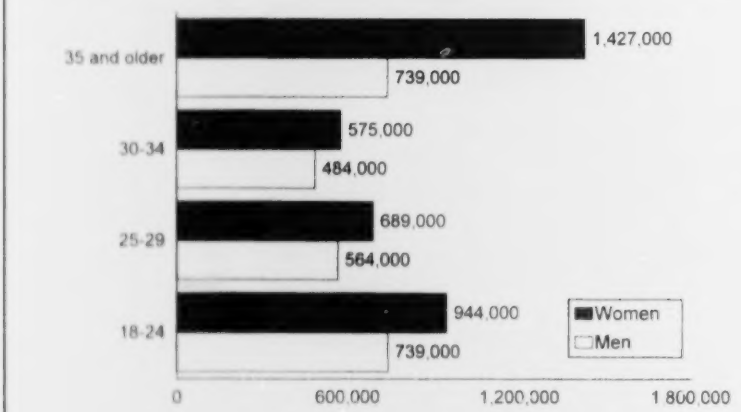
part-time students are primarily women

Between 1970 and 1993, much of the growth in part-time enrollments derived from an increasing number of women pursuing postsecondary studies. During this period, the number of women enrolled part-time almost tripled, from 1.2 million to 3.6 million. For men, the growth was far less pronounced, from 1.5 million to 2.5 million.

An important segment of these expanding part-time enrollments were women aged 35 years and older. Enrollments for this group more than quadrupled between 1970 and 1993.

- Women entered the labor force in record numbers during the past 25 years, and are projected to comprise 62 percent of new labor entrants by the year 2005.
- More women must be both breadwinner and care-giver, making full-time attendance virtually impossible.
- The rise in the number of two-income families suggests that many women will seek additional educational credentials in order to increase their earnings potential.
- Women narrowed the wage gap with men by 10 percent during the 1980s.

part-time enrollments by age and gender: fall 1993



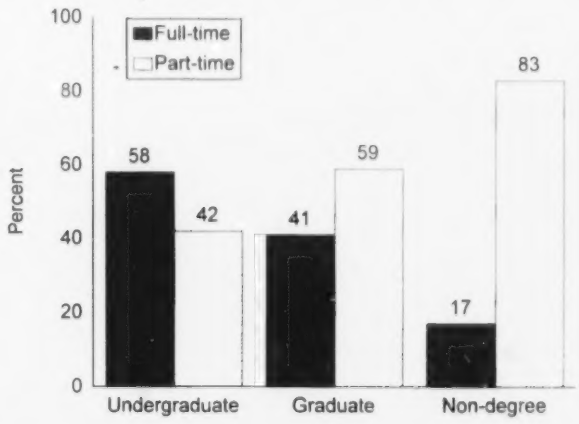
Source: National Center for Education Statistics, *Digest of Education Statistics*, NCES 95-029

most part-time credit students seek degrees

Most part-time students enrolled in credit programs seek degrees. In 1993, non-degree student enrollments accounted for only an estimated 10 percent of all student enrollments. These students are studying for credit, either at the pre-baccalaureate or post-baccalaureate levels, but are not pursuing degrees. Many non-degree students take classes to complement job skills or to satisfy certification or professional requirements. Others making the transition to higher education use these courses to prepare themselves for later degree study. These students represent an important population in continuing higher education and account for a share of all credit offerings at colleges and universities.

- Eighty-three percent of non-degree student enrollments at the pre-baccalaureate level were part-time in 1993.
- Many adults seek professional certificate programs that are comprised of credit courses, and many opt to obtain graduate degrees later on.
- State teacher-certification programs typically require adults to take credit courses at regular intervals in order to stay abreast of new knowledge.

higher education enrollments by level of study and attendance status: fall 1993



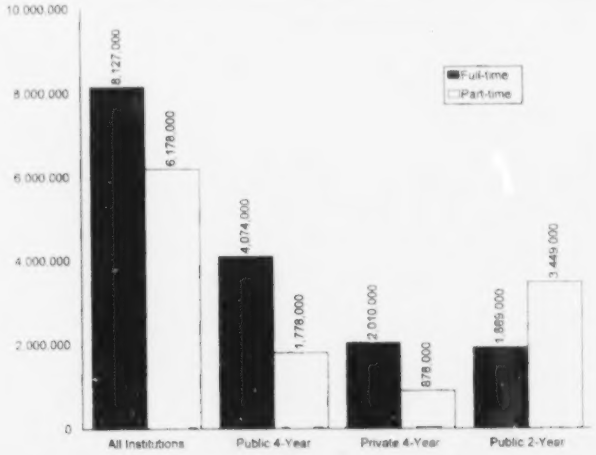
Source: National Center for Education Statistics, *Digest of Education Statistics*, NCES 95-029 and unpublished tabulations

most part-time students attend public two-year institutions

During 1993, almost 15 million student enrollments were recorded by the nation's higher education institutions. Part-time student enrollments totaled an estimated 6.2 million, or more than 43 percent of all higher education enrollments.

- The majority of part-time student enrollments (56 percent) were in public two-year institutions.
- Total part-time student enrollments at two-year institutions surpassed full-time enrollments by nearly two-to-one.
- Forty-three percent of the part-time student enrollments were in four-year institutions.

higher education enrollments by attendance status and institutional type: fall 1993



Source: National Center for Education Statistics, *Digest of Education Statistics*, NCES 95-029

most university distance education students are served by public in-state institutions

Almost two-thirds of public doctoral universities with technology-based distance education programs have more than half of their distance education students residing more than 25 miles from the main campus. Ten percent of such institutions serve more than half of their distance education students out-of-state. By contrast, only 16 percent of public, two-year institutions have more than half of their distance education students residing more than 25 miles from the main campus.

Students who enroll in technology-based distance education programs typically do so for convenience. Many of these students work part- or full-time, or have personal or family responsibilities that may it difficult for them to attend traditional campus classes. For such students, convenience often ranks in importance over other considerations. The fact that the majority of distance educations students who enroll in public, doctoral institutions reside within the state suggests that students seek to take advantage of in-state tuition and fees, rather than to enroll in out-of-state institutions.

- Twenty-five percent of public doctoral university distance education students live within 25 miles of campus; 61 percent reside more than 25 miles from campus.
- Some 47 percent of private institutions serve students residing within 25 miles of campus, and 43 percent serve students living more than 25 miles from campus.
- Only 16 percent of public two-year institutions serve students who reside more than 25 miles from campus.

percentages of institutions with 50 percent or more of technology-based distance education students located at various distances from campus

	Public Doctoral	Public Comp.	Public 2-Year	All Private Institutions	All Institutions
Within 25 miles of campus	25	43	69	47	54
More than 25 miles from campus but within the state	61	68	16	43	37
In other state(s)	10	3	0	20	5
Outside the United States	0	0	0	3	1

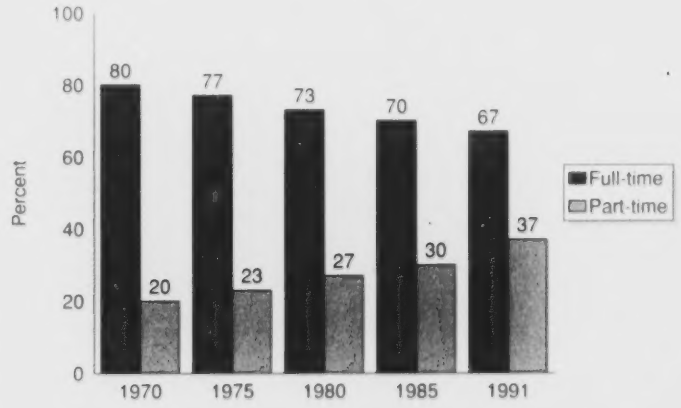
Source: SRI International, *1994 Study of Communications Technology in Higher Education*, May 1995

increasing numbers of baccalaureate students are part-time

The number of part-time students working toward their baccalaureate degree has risen since 1970. Greater numbers of women and minorities are enrolling in baccalaureate programs. Many of these students are choosing part-time baccalaureate degree programs. Employers often execute contracts with universities to provide on-site degree programs for their employees.

- In 1970, full-time baccalaureate enrollments outnumbered part-time enrollments by four to one.
- In 1991, an estimated 37 percent of all baccalaureate-level enrollments were part-time. This figure represents a significant increase in the ratio of part-time students to full-time students since 1970.

baccalaureate-level enrollments by attendance status: 1970 to 1991 (estimated)



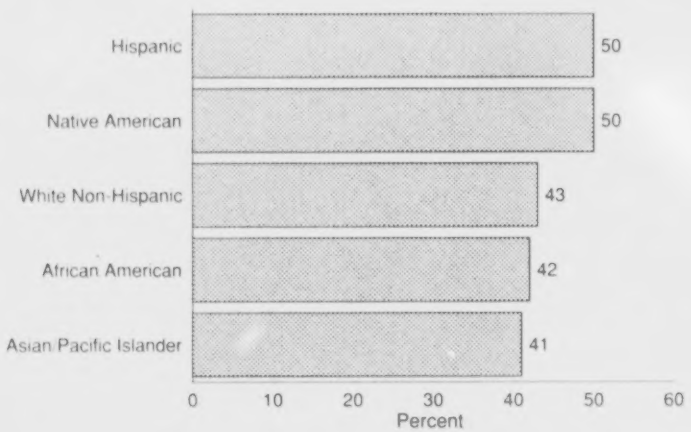
Source: National Center for Education Statistics, selected statistics and unpublished tabulations

nearly half of all minority college students enroll part-time

Enrollment patterns of minority students closely resemble those of white students. There are slight differences, however, in the enrollment patterns of different racial/ethnic groups.

- Fifty percent of Hispanics were enrolled part-time in 1992.
- Nearly 41 percent of Asians and Pacific Islanders were enrolled part-time.
- Some 42 percent of African American enrollments were part-time.
- Forty-four percent of white enrollments were part-time in 1992.
- Forty-five percent of Native Americans were enrolled part-time.

part-time enrollments by race/ethnicity participation rates: fall 1992



Source: National Center for Education Statistics, *Trends in Minority Enrollments in Higher Education, Fall 1982 through Fall 1992*, NCES 94-104

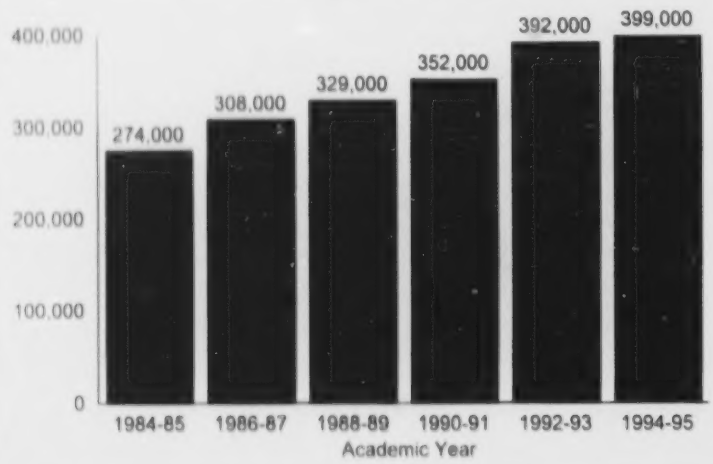
independent study enrollments are increasing

Independent study programs at four-year higher education institutions showed remarkable growth during the 1980s. These programs offer college level credit and non-credit courses, as well as high school diploma programs by correspondence. A number of institutions also offer external degrees, which can be completed with a minimum of time on campus.

Independent study is recognized as an indispensable part of American higher education. Such study is usually defined as an educational process in which a student is able to complete a course of study where and when the student chooses, instead of attending regularly scheduled classes. Students engaged in independent study use not only correspondence instruction, but also television, audio cassette tapes, and computer-assisted learning. Independent study opportunities are sought by diverse student constituencies. Military personnel stationed in remote locations find independent study to be a viable option, as do students in small, rural high schools seeking advanced courses, and students who are homebound for various reasons. For students who hold full-time jobs that require frequent relocation and/or travel, independent study offers a means to earn degree-credit and to advance their careers.

- Independent study enrollments at NUCEA institutions grew by more than 45 percent overall between 1984-85 and 1994-95.

independent study enrollments at nucea member institutions by year



Source: NUCEA Division of Independent Study Program Profiles, selected statistics

certificate students prefer business and education programs

American colleges and universities awarded nearly 11,000 certificates to students with baccalaureate degrees in 1986-87. Certificates are awarded to students who have acquired certain proficiencies in a specialized area of study through an educational program. Depending on the subject area, certificate programs generally include a number of required courses and a few electives. Some programs also require a practicum or internship.

- Sixty percent of certificates were awarded to students with baccalaureate degrees, and 40 percent to students with master's degrees.
- Roughly 74 percent of certificate programs beyond the baccalaureate level were in business management or education programs.
- Many certificate programs consist of clusters of graduate-level courses that can subsequently be applied toward a master's degree.
- Some institutions are compressing one-year, part-time certificate programs into five-to-six week, intensive programs in response to demands from international students.

college/university post-baccalaureate certificate awardees: 1986 to 1987

Rank	Program Category	Total	Men		Women	
			number	percent	number	percent
1	Business and Management	4,647	3,989	85	658	15
2	Education	3,596	1,228	34	2,341	66
3	Theology	504	353	70	151	30
4	Health Sciences	264	117	44	147	56
5	Liberal/General Studies	205	109	53	96	47
6	Social Sciences	187	117	62	70	38
7	Multi/Interdisciplinary Studies	135	81	60	54	40
7	Psychology	135	40	29	95	71
9	Computer/Information Sciences	133	63	47	74	53
10	Law	126	52	41	74	59

Source: National Center for Education Statistics, *Completions in Institutions of Higher Education, 1986-87*, NCES 90-322, table 10

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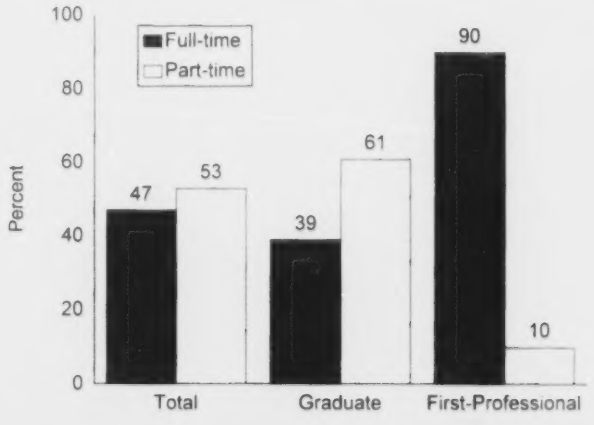
majority of master's degree candidates are part-time graduate students

Of the more than 1.9 million post-baccalaureate degree enrollments during 1993, an estimated 80 percent were at the master's degree level. It is estimated that two-thirds of those enrollments were part-time. Increasingly, greater numbers of adults are going back to school to earn master's degrees, especially in professional fields. The value of post-baccalaureate-level study is increasing every year as a greater number of new jobs require higher level knowledge and skills.

- Sixty percent of graduate students attended part-time.
- Twenty-six percent of master's degrees were in education and 24 percent, business, management and administrative services.
- Virtually all professional-degree-seeking students attend full-time.
- Fifty-five percent of master's degrees in 1994 were awarded to women.
- Seventeen percent of all degrees awarded are masters.
- Forty percent of all doctoral degrees in 1994 were awarded to women.

post-baccalaureate enrollments by program level and attendance status: fall 1993



Source: National Center for Education Statistics, *Digest of Education Statistics*, NCES 95-029

FINANCING STUDY

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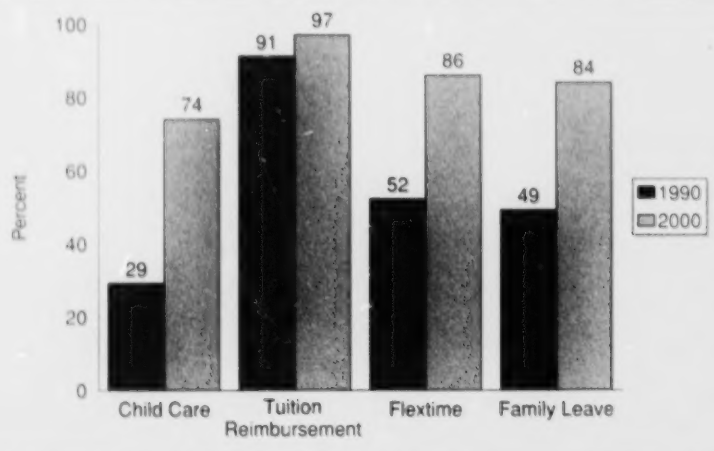
continuing education ranks first in importance among employee benefits

As America's population continues to slow in growth, diversify and grow older, employers are increasingly turning to employee benefits to attract and retain workers.

Among the many benefits offered to their employees, continuing education is considered the most important and, not surprisingly, among the most prevalent.

- More than 90 percent of companies currently offer continuing education as an employee benefit, and 97 percent plan to offer their employees this benefit by the year 2000.
- Continuing education ranks above child care, flextime and family leave benefits, considered among the most popular for employees.

percentage of companies offering or planning to offer selected benefits: 1990 vs. 2000



Source: International Foundation of Employee Benefits Plans survey of 1,865 member companies. (Of the respondents, representing a cross-section of the business community, 21 percent employed fewer than 500 workers, 49 percent employed 500-4,999, and 30 percent employed 5,000 or more)

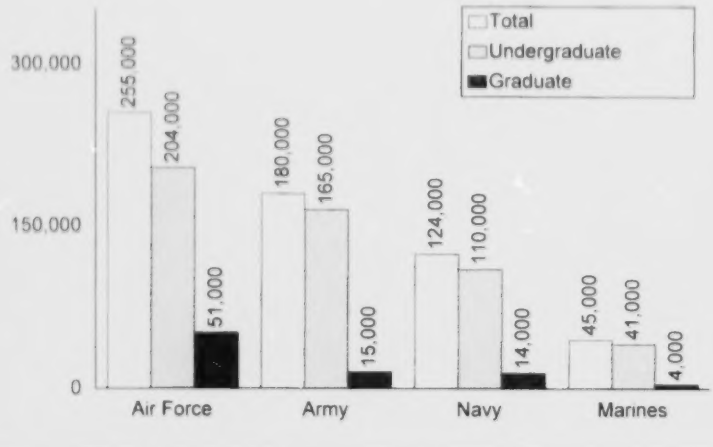
military enrollments in voluntary continuing education programs constitute a significant student population

The Montgomery GI Bill and other tuition incentives have induced more members of the armed forces, both active and reserve, to enroll in college classes and degree programs. During Fiscal Year 1995, active military personnel accounted for more than 604,000 enrollments. This figure is down 29,000 enrollments from Fiscal Year 1994 due to military downsizing.

A vast international network supports voluntary continuing education programs for the military. More than 475 installations around the world offer education programs to service members. More than 600 U.S. colleges and universities are involved in offering specialized educational programs to military personnel.

- In 1995, the Air Force registered more than 255,000 total enrollments in higher education programs, the highest for all military service branches.
- Army personnel accounted for some 180,000 total enrollments in higher education programs.
- The Navy accounted for some 124,000 enrollments.
- The Marines registered over 45,000 total enrollments.

military participation in voluntary continuing higher education programs: fiscal year 1995



Source: U.S. Department of Defense, Office of Adult and Continuing Education

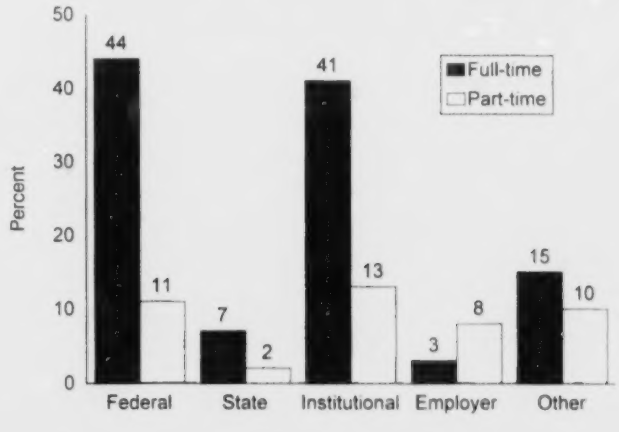
postbaccalaureate, part-time students depend on employer-provided tuition assistance

The nation's part-time students rely to a much larger extent on their own resources and employer-provided assistance to support their postsecondary studies. Of all the students who reported receiving assistance from their employers, 81 percent were enrolled on a part-time basis. Only one-third of all part-time students report receiving aid from other aid sources.

Employer-provided educational assistance increasingly is tied to job-related education and job performance. And the uncertainties associated with the federal tax exclusion of employer-provided educational assistance in recent years has caused many employers to discontinue providing non-job related tuition assistance.

- Only 11 percent of all postbaccalaureate, part-time students receive aid of any kind from federal student-aid programs.
- State-based tuition aid is awarded to only 2 percent of all postbaccalaureate, part-time students.

students receiving financial aid by source and attendance status: fall 1992



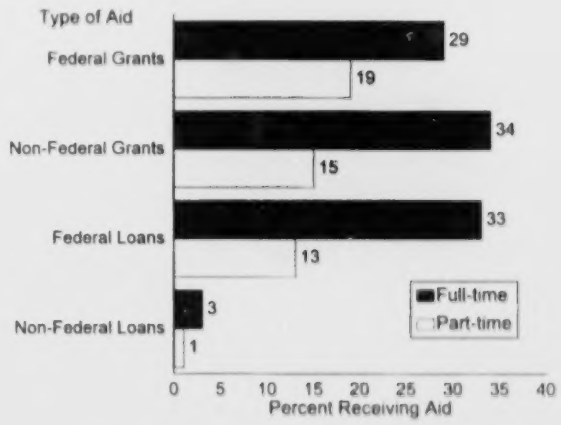
Source: National Center for Education Statistics, *Digest of Education Statistics*, NCES 95-029

part-time undergraduates receive little tuition assistance

The majority of part-time undergraduate students use their own financial resources to pay for college. In many instances, part-time students are ineligible to receive aid at the state and institutional level. While part-time students are eligible for federal aid, few students actually receive any help from federal grants or loans.

- Slightly less than 19 percent of part-time undergraduates received federal grant assistance in fall 1992.
- The situation was slightly worse for non-federal grants, with 15 percent of part-time undergraduates receiving assistance.
- Fewer part-time undergraduates take out loans for college in comparison to full-time students.

percentage of undergraduates receiving student aid by source and attendance status: fall 1992



Source: National Center for Education Statistics, *Digest of Education Statistics*, NCES 95-029

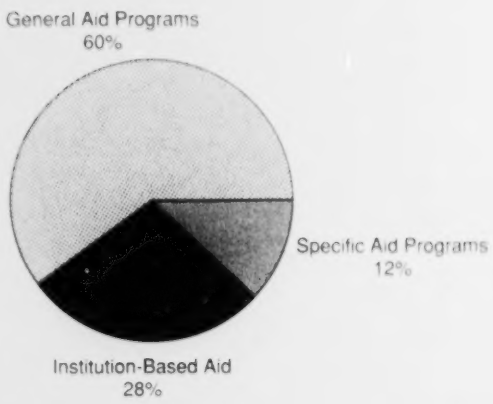
states implement financial aid programs for part-time students

In the late 1980s, some states enacted significant financial aid programs specifically targeted for part-time students. Currently, seven states (Colorado, Maryland, Michigan, New Jersey, New York, Ohio, and Vermont) offer such special financial aid programs for part-time students. By comparison, only two states offered such programs in 1986.

Fourteen states reported giving part-time students tuition assistance during the 1992-93 academic year. Despite these gains, only a small percentage of the part-time students receive state aid to help defray their college costs.

- Sixty percent of states have no special aid program for part-time students.
- Twenty-eight percent of the states provided part-time students tuition aid through funds appropriated to institutions.
- Twelve percent of the states provided assistance to part-time students through programs designed specifically to assist needy, part-time students.

state aid programs for part-time students: 1992-93



Source: National Association of State Scholarship and Grant Programs, *24th Annual Survey Report, 1992-93 Academic Year*

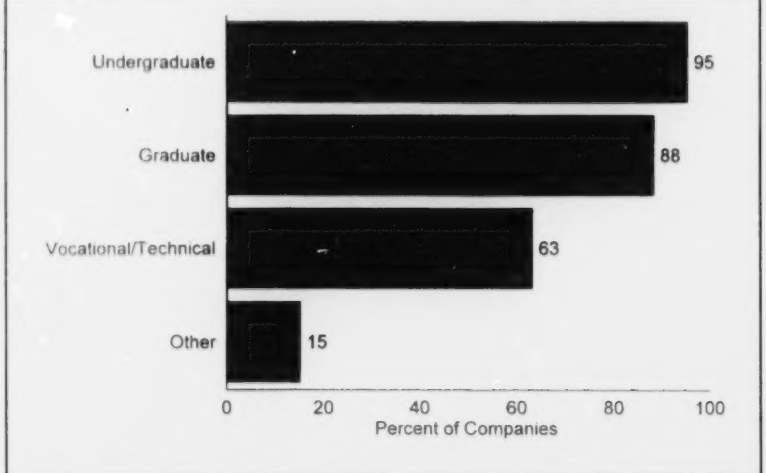
most employers finance college-level studies

Some 93 percent of companies surveyed in 1993 provided educational assistance to their employees through one or more benefits plans. The majority of those companies (61 percent) provided educational assistance for coursework that they deemed to be job-related. Companies spent a median $60,000 on educational programs for their employees, and the vast majority of the courses paid for by employers were provided by colleges and universities.

Slightly less than half of the companies providing educational assistance to their employees place annual cash limits on the amount of assistance employees can receive, with $2,501 to $5,250 being the most frequently cited upper limit reported by companies. In 1993, employees could receive up to $5,250 in employer-provided tuition assistance without including such assistance in their taxable income through a federal tax exclusion. Half of companies required employees to work for the company for a specified period of time before being eligible to receive educational benefits. And nearly two-thirds of employers require passing grades (usually "C" or better) before tuition is reimbursed.

- Ninety-five percent of companies underwrite undergraduate-level coursework taken by their employees.
- Better than 88 percent underwrite graduate-level coursework.
- Sixty-three percent of companies pay for vocational and/or technical coursework taken by their employees.

types of coursework underwritten by employers in 1993



Source: International Foundation of Employee Benefits Plans

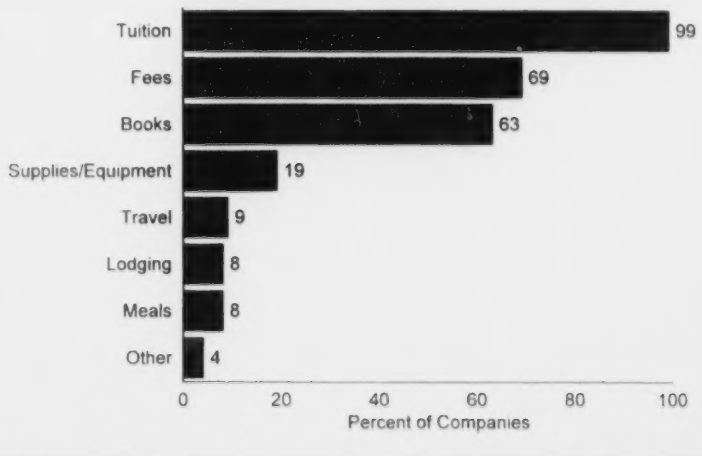
companies support a broad range of educational expenses

Companies surveyed in 1993 supported a broad range of educational expenses on behalf of their employees. Ninety-nine percent of companies reimbursed employees' tuition expenses, and covered other costs associated with continuing education. Such support is critical for part-time working students, who typically receive little or no tuition assistance from sources other then employers.

Education costs covered include tuition and fees, including enrollment and laboratory fees. In addition, some employers cover books, supplies and equipment.

- Ninety-nine percent of companies reimburse tuition to their employees.
- Some 9 percent of companies covered the travel expense for their employees who were engaged in educational programs.
- Eight percent covered meals and lodging for employees traveling in order to participate in educational programs.
- Better than 15 percent of companies grant leave time to their employees in order to permit participation in educational programs.

educational expenses supported by employers in 1993



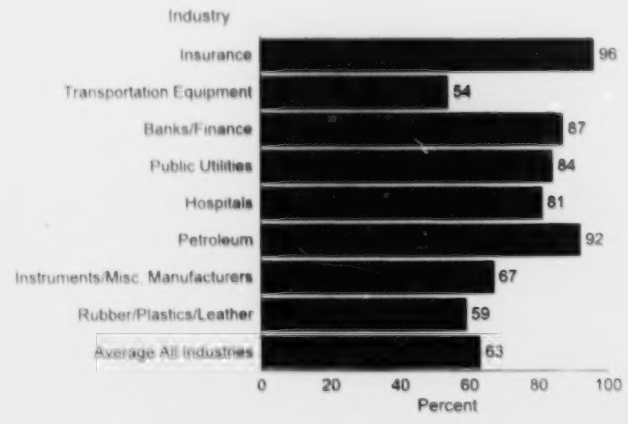
Source: International Foundation of Employee Benefits Plans

service industries are leading providers of employee tuition assistance

Employee educational assistance is a benefit provided by 56 percent of the manufacturing industry and 68 percent of the non-manufacturing industries. Ninety-six percent of insurance firms reported providing educational assistance to their employees, while better than 80 percent of hospitals, public utilities, banks, finance and petroleum firms reported providing such assistance. It is estimated that employers spend $30 billion annually on formal education and training, or approximately 1 percent of payroll. Many other nations require companies to set aside specific percentages for education and training.

These data suggest where some of the demand for continuing education may come from in the future. Employees receiving aid from these industries may pursue course work in concentrated areas, such as business, chemical engineering, health administration, financial planning, and a dozen or more related fields. Working part-time students rely extensively on employer-provided tuition aid in order to pursue their postsecondary studies.

percentage of firms, by type, providing educational assistance to their employees in 1994



Source: U.S. Chamber of Commerce, *1995 Employee Benefits Report*, table 13

PREPARING FOR THE GLOBAL ECONOMY

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more immigrants with professional credentials are being admitted to the United States

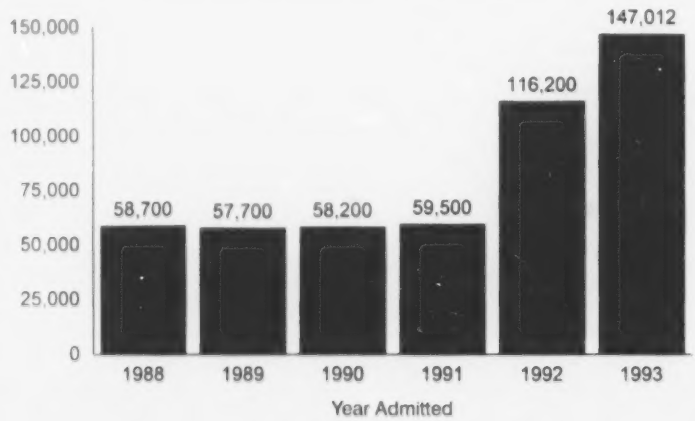
During 1993, according to the U.S. Department of Justice, 904,292 immigrants entered the United States legally.

The Immigration Act of 1990 provides for refugee resettlement and family reunification and large numbers of immigrants are admitted annually under those provisions. Since October 1, 1991, when the 1990 legislation took effect, the flow of employment-based immigrants has expanded markedly. Under the new law, the annual allotment for this category of "occupational preference" immigrants has nearly tripled from 54,000 to 147,000. Such immigrants include those with the highest distinguished academic or professional credentials, other advanced degree holders, and skilled workers and other professionals.

During 1992, 12 nations supplied 64 percent of all legal entrants into the United States. Individuals from Mexico accounted for the largest group, with 213,802 or 22 percent of all immigrants. Other origin countries included Vietnam, the Philippines, former Soviet Union, the Dominican Republic, Mainland China, India, El Salvador, Poland, the United Kingdom, Korea, and Jamaica.

The vast majority of all legal immigrants (34.6 percent) chose California as their final destination. Over 15 percent settled in New York; 8 percent, Texas; 6 percent, Florida; 5 percent, New Jersey; 5 percent, Illinois; 2 percent, Massachusetts; and 2 percent, Virginia. The remaining states captured 22 percent of the legal immigrants in 1992.

immigrants admitted by occupational preference: 1988-1993



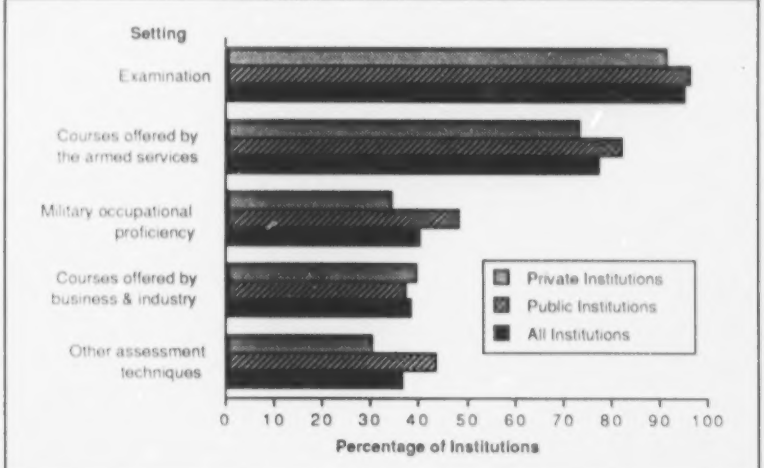
Source: U.S. Department of Justice, *U.S. Statistical Yearbook of the Immigration and Naturalization Service*

most institutions use examinations in awarding credit for prior learning

Recognizing the value of today's diverse learning opportunities, 97 percent of the nation's higher education institutions have developed policies to award credit for learning acquired in non-collegiate settings. During 1984-85 (the latest data available), more than 166,000 students were granted credit for extra-institutional learning at approximately 3,100 colleges and universities.

- Ninety-three percent of the nation's higher education institutions award credit for prior learning if students take examinations to assess their knowledge and skills. The majority of institutions use The College Board's College-Level Examination Program (CLEP) to assess students' skills.
- Seventy-seven percent of colleges and universities grant credit for course work completed while in the military. Only 40 percent grant credit for occupational proficiency gained in the armed services.
- Nearly 40 percent of institutions grant credit for courses offered by businesses and industry.
- More than 33 percent grant credit through the use of alternative assessment techniques to gauge students' skills.

percentage of institutions that grant credit for learning acquired in non-collegiate settings



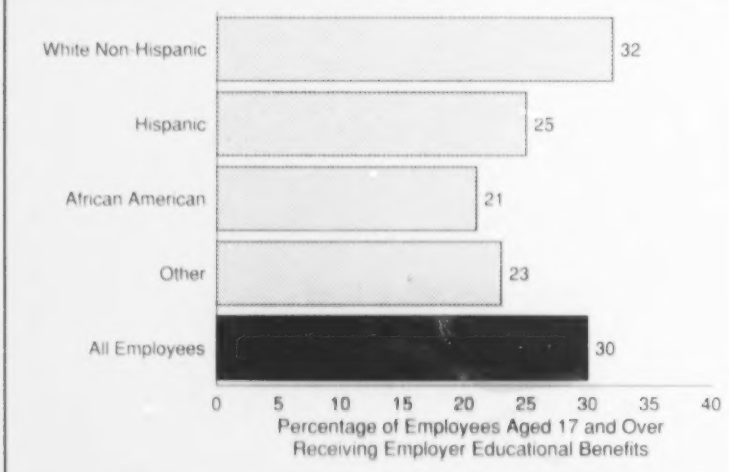
Source: American Council on Education, *Admission and Credit Policies for Adult Learners*, Higher Education Panel Report #72, December 1986

minorities receive less employer support for education

An increasing number of new jobs created by the year 2005 will go to minority workers. More than ever, the skills needed to perform these new jobs will be more complex and sophisticated. The majority of new jobs will require greater participation in employee education and training. Currently, more white employees report receiving employer support for education and training than do minority employees. Employer support refers to time off from work and payment towards fees and educational expenses. Many employees receive education and training courses on the job, either during working hours or after working hours. Courses are provided by for-profit training organizations and non-profit educational providers, such as colleges or universities.

- During 1991, 32 percent of white employees received some type of employer-supported education and training.
- Twenty-one percent of African American employees received employer support for education and training.
- Twenty-five percent of Hispanic employees received employer support for education and training.
- One-half of all employers receiving employer support for education and training had bachelor's degrees; only 25 percent had only a high school diploma.

employees receiving employer support for education: 1991



Source: National Center for Education Statistics, *National Household Education Survey, 1991*

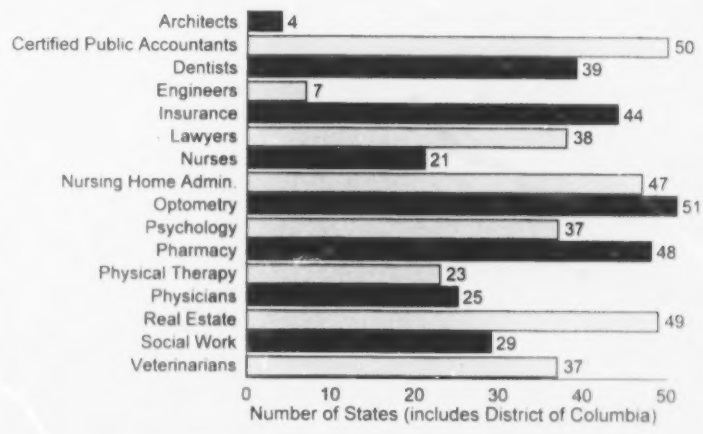
states mandate continuing education for professionals

States are demonstrating increased interest in the quality of services offered by the nation's professionals and, as a result, are mandating continuing education for a variety of professions. Professions, too, are placing a premium on education and training as a way to ensure that professionals maintain competencies in specialized fields. Professionals in the fastest growing information or highly technical fields commonly use continuing education to stay abreast of the latest developments and practices in their areas of specialty.

Mandatory professional continuing education usually implies that professionals must complete a designated number of hours of study provided by an approved educational institution, such as a college or university. Given the rapid pace of change, most higher education institutions tend to offer professional programs that exceed the minimum requirements for state-licensed professions.

- Between 1981 and 1995, 12 states implemented mandatory continuing education for certified public accountants (CPAs). Every state but one now requires mandatory continuing education for CPAs.
- Twenty-eight more states approved mandatory continuing education for lawyers between 1981 and 1995, bringing the total to 38.
- Mandatory continuing education for pharmacists rose from 22 to 48 states between 1981 and 1995.
- Real estate brokers are now required to take continuing education in 49 states, an increase of 27 since 1981.

number of states requiring continuing education, by profession: 1995



Source: Louis Phillips and Associates, "1995 Mandatory Continuing Education Update," Fall 1995 Newsletter

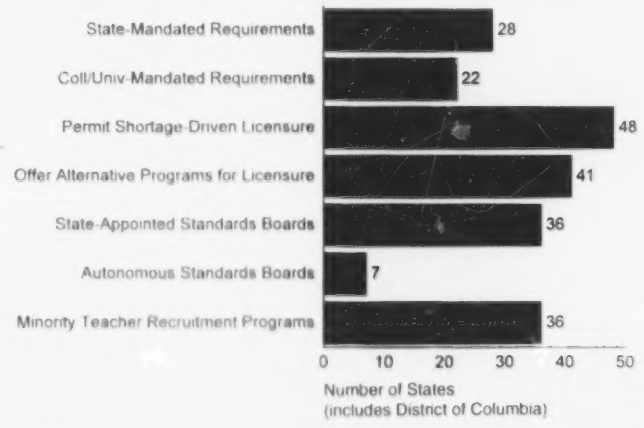
K-12 school reform places emphasis on excellence

State governors are leading an effort to reform the nation's elementary and secondary school system. At the heart of K-12 school reform is teacher education. The reform effort focuses on the need to adopt national standards and assessment for academic performance by both students and teachers. Such standards and assessment would replace minimum competency testing as a criteria for certifying elementary and secondary teachers. National performance standards and assessment imply that in-service teacher programs will be more pivotal to the school reform movement and that continuing education for teachers will come under increasing demand.

America's K-12 school system also continues to grapple with teacher shortages. Teacher shortages affect disproportionately inner city schools in one-third of the states nationwide. Most states now permit shortage-driven certification for teachers and offer alternative programs for teacher certification. The need to recruit minority teachers and bilingual teachers is placing increasing pressure on school districts to adopt minority teacher recruitment programs.

- During 1994, 28 states had state-mandated requirements for teachers; the remaining states had requirements set by colleges and universities.
- Forty-eight states permit shortage-driven licensure for teachers; 41 states offer alternative programs for licensing teachers in order to address shortages of qualified teachers.
- Thirty-six states use state-appointed standards boards, while 7 states permit standards boards to remain autonomous.
- Recognizing the increasing need for minority teachers, 36 states have adopted recruitment programs for minority teachers.

selected state programs for teacher certification: 1994



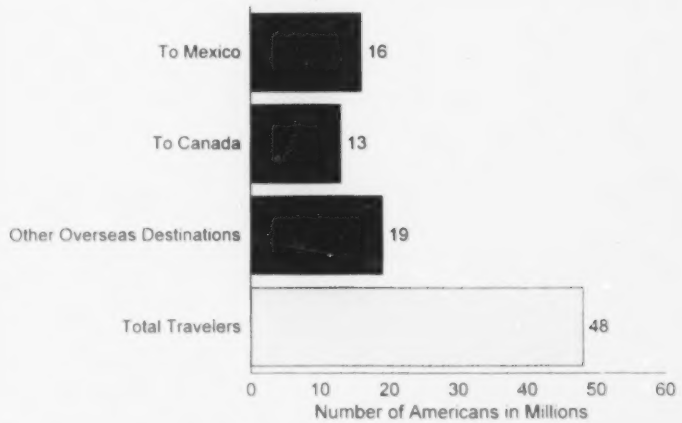
Source: American Association of Colleges for Teacher Education, *Teacher Education Policy in the States*, December 1994.

global economy spurs U.S. travel to foreign countries

Thirteen million more Americans traveled abroad in 1995 than in 1985, representing a 37 percent increase in the space of ten years. The 47 million Americans who went abroad in 1995 spent some $45 billion in their host countries. The NAFTA countries attracted the most American travelers in 1995, with 16 million U.S. citizens visiting Mexico; and 13 million, Canada. Also that same year, some 19 million U.S. citizens traveled overseas to other countries in Europe, Asia, Africa, Latin America, and the South Pacific.

- During 1985, some 35 million Americans traveled outside the United States; in 1995 the number had climbed to near 48 million.
- Mexico hosted 16 million Americans during 1995; Canada, 13 million.

U.S. travel to foreign countries: 1995 (projected)



Source: U.S. Travel and Tourism Administration; unpublished data

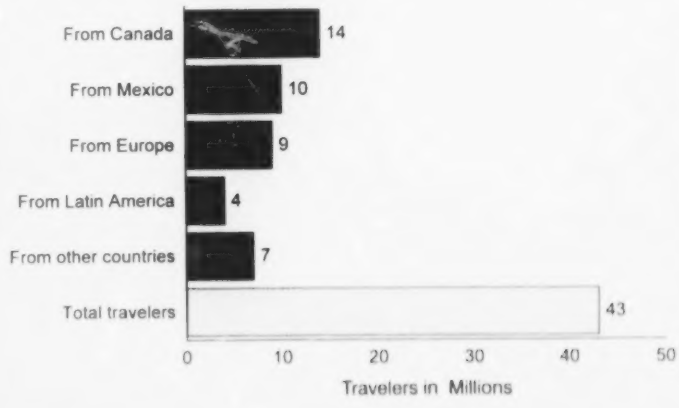
foreign travel to the United States creates new continuing education opportunities

Nearly 43 million international visitors were estimated to have visited the United States in 1995, constituting a 69 percent increase in international travel since 1985. International visitors were projected to spend more $58 billion, of which $17 billion was collected in travel fares by U.S.-based carriers. Travelers from North America (Mexico and Canada) comprised an estimated 23 million, while visitors from European nations, Latin America, and other countries comprised the rest.

International travel to the United States is creating new opportunities and demand for travel and tourism programs offered by the nation's colleges and universities. With international travel to the United States bringing in an estimated $58 billion, travel and tourism professionals across the nation are seeking new ways to market to international travelers and to promote U.S.-based cultural and social institutions.

- During 1985, some 25 million international visitors traveled to the United States; in 1995, and estimated 43 million came to the United States.
- Of those, more than 23 million traveled from Mexico and Canada, while another 19 million or more visited from overseas countries and South America.

foreign travel to the United States: 1995 (estimated)



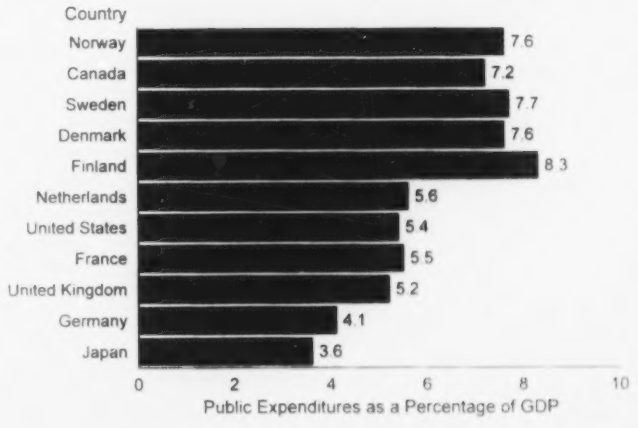
Source: U.S. Travel and Tourism Administration, unpublished data

other nations invest more in education

The United States investment in education at all levels ranks only slightly better than average for most developed countries. When viewed as a percentage of gross domestic product (the sum of all goods and services produced and consumed at home), U.S. public investment in education during 1992 was 5.4 percent. The average for all nations during 1992 was 5.1 percent. Among the United States' chief competitors, Japan far spent less (3.6 percent) on education during 1992. However, Japan realized more on its investment in terms of productivity growth, which averaged 6 percent during 1950-1989, compared to the productivity growth in the United States which averaged 1.9 percent over the same period.

The United States' workforce continues to be one of the most productive in the world. Nonetheless, other countries are gaining ground quickly. With the nation's labor force projected to expand more slowly during the coming decade, investments in education and training will be especially critical to ensuring that the United States remains able to compete effectively in the global market.

public expenditures on education as a percentage of gross domestic product: 1992



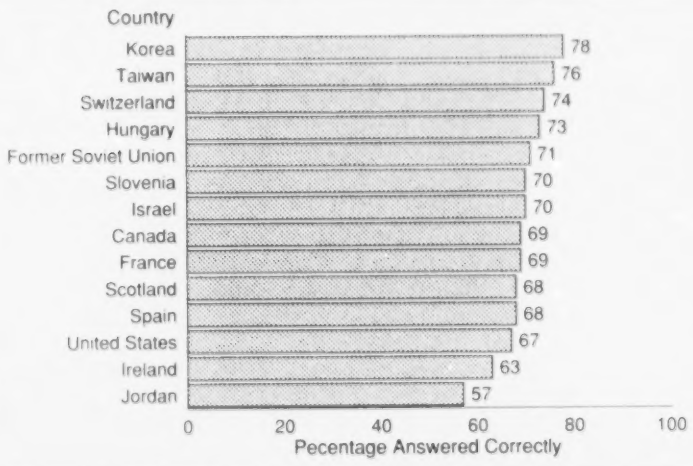
Source: Organization for Economic Cooperation and Development, *Education at a Glance*, Annual

American children exhibit low levels of scientific literacy

Recent reports have highlighted the low levels of scientific literacy among of American school children. Relative to comparably aged youth in other developed countries, U.S. high school students were revealed to have only limited knowledge of basic science. As a consequence, most college students opt to study non-scientific disciplines with which they feel more comfortable Promoting scientific literacy among America's youth is critical to the United States' ability to exploit emerging technologies and to research and development and patenting new discoveries.

In 1990, the nation adopted national education goals for all Americans. Among the goals established was that American school children should be first in the world in mathematics and science by the year 2000. The purpose of the National Education Goals is to focus attention on the need to motivate and encourage students to pursue science and mathematics education, and to emphasize the importance of such disciplines in school curricula nationally. Other nation's place a higher priority on student achievement in the sciences than does the United States.

average percentage of correct scores on science questionnaires for 13-year-olds by selected countries: 1990-91



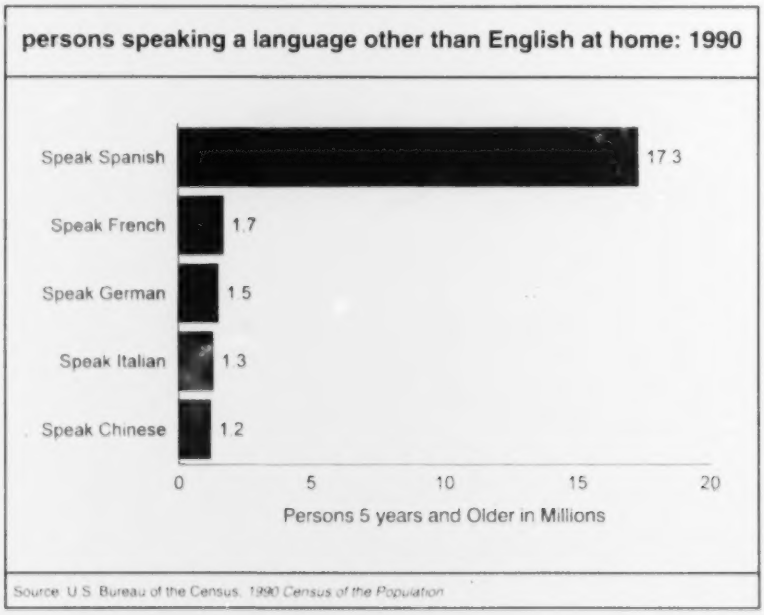
Source: Educational Testing Service, *Learning Science*, The International Assessment of Educational Progress, February 1992

Spanish spoken by more than half of all non-native English speakers

Some 32 million U.S. residents speak a language other than English at home. Overall, non-native English speakers constitute 17 percent of the U.S. resident population over the age of 5. Of these, 54 percent claim Spanish as their first language. Principal languages other than English spoken at home include the Romance languages of French and Italian, followed by German, where 4.5 million residents use such languages at home. The number of residents over the age of 5 who converse in Chinese is 1.2 million.

Non-native speakers of English are not spread evenly across the United States. Five states (New Mexico, California, Alaska, Arizona, and Texas) have seen their K-12 school limited-English-proficient enrollments climb at rates far above the average for the United States as a whole. The increase in the number of non-native English speakers creates new challenges and opportunities for continuing education divisions. As a consequence, enrollments in foreign language programs are growing because many school teachers, public health and safety personnel, and industry managers are finding that they require at least a working understanding of other languages to function effectively.

- The 1990 Census identified more than 31 million residents who speak a language other than English at home.
- Fifty-four percent of those residents aged 5 and older who speak another language claim Spanish as their first language.
- More than 8 percent of workforce age (18-to-65) residents speak Spanish as their first language.



Source: U.S. Bureau of the Census, *1990 Census of the Population*

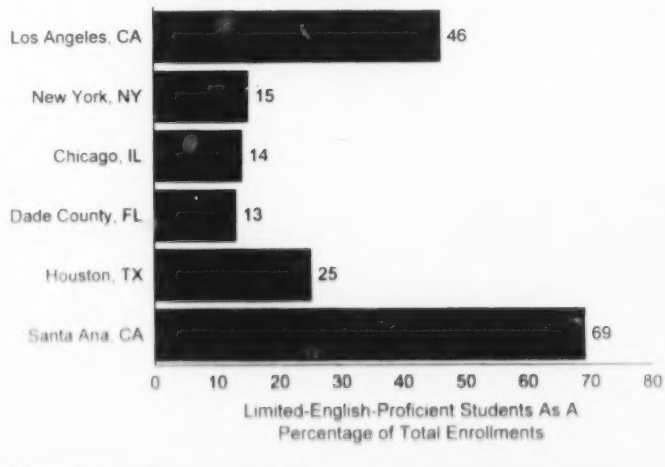
continuing education responds to increased demand for bilingual teachers

The rapidly changing composition of the U.S. population, coupled with the projected growth in legal immigration, is pushing national demand for bilingual teachers to a record high, particularly at the elementary and secondary levels.

Bilingual education requires teachers to have command both of English and the student's primary language. Limited-English-proficient students generally have a history of poor performance in schools without bilingual education and are under-represented in postsecondary education. The goal of bilingual education is to raise the academic performance of these students so that they can join the educational mainstream. Without it, these students become adults with limited career options.

College and university continuing education units are helping to alleviate these problems both by providing bilingual and English-as-a-second-language programs, and by developing programs to reach teachers on-site through distance education and other innovative programs.

top school districts having students with limited English ability: 1993-94



Source: National Clearinghouse for Bilingual Education

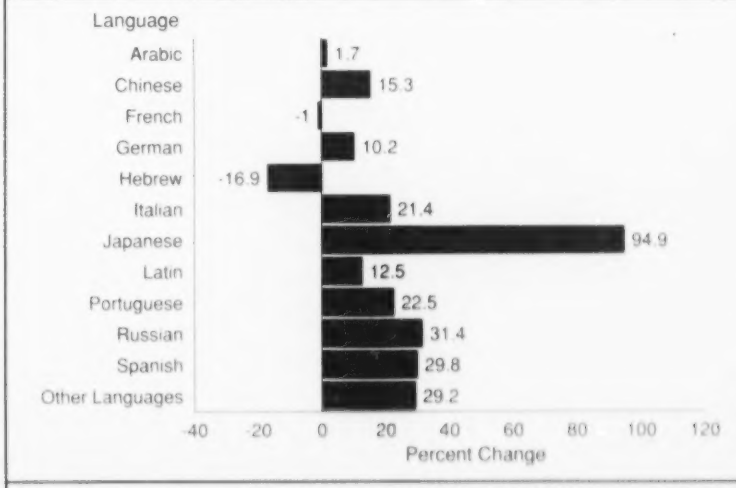
foreign language enrollments are increasing and showing more diversity

Foreign language enrollments in American universities are increasing and becoming more reflective of the economic realities of a global economy. For instance, French enrollments are down 1 percent, whereas Chinese enrollments increased more than 5 percent between 1986 and 1990. Interest in Japanese, Spanish, German, Russian, Italian and Portuguese also rose.

These trends suggest a growing interest in language acquisition by both students and perhaps an increasing recognition of the value of foreign language competency in a global economy.

- Currently, some 22 percent of universities have foreign-language admission requirements for all students; 14 percent have them for some students.
- Only 9 percent of universities make foreign language study a graduation requirement for all students; 68 percent, for some students.

changes in university undergraduate foreign-language enrollments by language: 1986-1990



Source: Richard Brod and Bettina J. Huber. "Foreign Language Enrollments in United States Institutions of Higher Education, Fall 1990", ADFL Bulletin, Vol. 23, No. 3, Spring 1992

BUILDING A LITERATE AND AN INFORMED SOCIETY

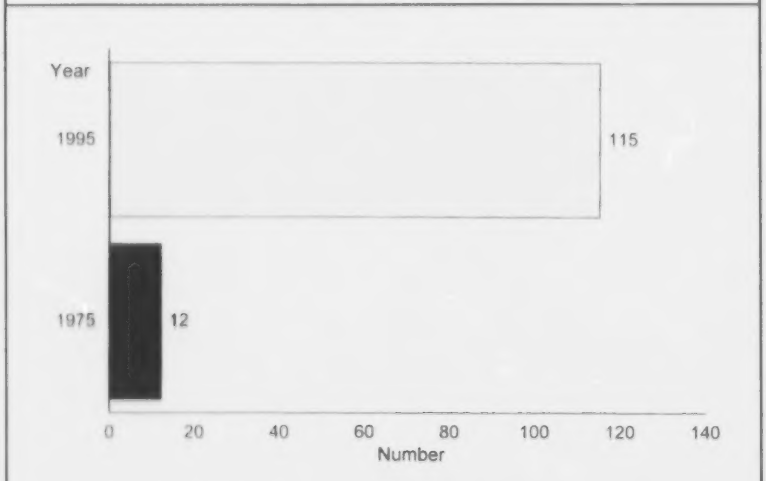
54

master of liberal studies programs are multiplying

The study of liberal arts has been at the center of educational curricula since the advent of colleges and universities. Increasingly, professionals recognize the importance of liberal studies for success in the working world, regardless of occupation. Master of Liberal Studies (MLS) degrees offer students the opportunity to pursue graduate-level studies leading to a multi-disciplinary master's degree in the liberal arts. Such programs typically consist of a core curriculum, course electives, and a graduate thesis or major research project. Students complete between 30 and 36 credit hours at the graduate level. Part-time MLS students complete their degrees within a three- to five-year period.

The first MLS program was developed by Wesleyan University (Connecticut) in 1953, followed by Johns Hopkins University in 1962. Since then, membership in the Association of Graduate Liberal Studies Programs has grown to some 115 programs at colleges and universities around the country. Programs tend to be small and are usually administered and operated by the continuing education unit in conjunction with the institution's graduate college of liberal arts.

growth in master of liberal studies programs: 1975 to 1995



Source: Association of Graduate Liberal Studies Programs; membership data

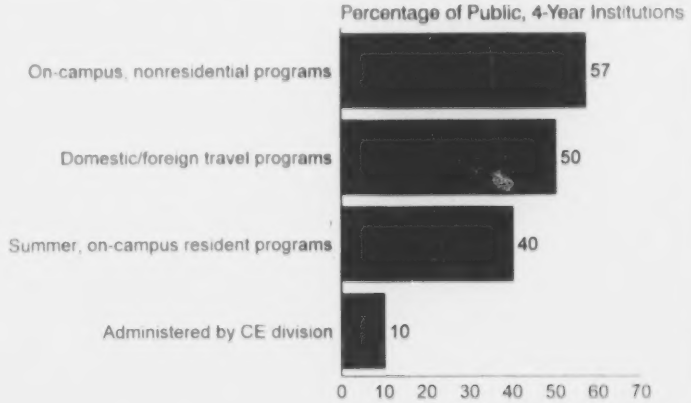
continuing education for alumni is increasing in size and scope

Since 1913, when Yale University began a reading program for alumni, continuing education programs for alumni have become an integral component of many institutions' programs. Some institutions offer a comprehensive program of activities throughout the year. Others confine their programs to homecoming weekend. The estimates are, however, that two-thirds of the colleges and universities offer some type of continuing education programs to their alumni.

The growth in the number of Americans with college degrees, from 12 million in 1970 to 36 million in 1994, has helped to support the expansion of alumni continuing education programs .

- Fifty-seven percent of four-year colleges and universities offer on-campus, nonresidential alumni continuing education programs, such as alumni weekends, seminars, and reunions.
- Half of the institutions offer domestic and foreign travel alumni continuing education programs.
- Forty percent offer summer, on-campus resident programs for alumni.
- Ten percent of institutions rely exclusively on a division of continuing education to administer their alumni programs.

characteristics of alumni continuing education programs



Source: Council for the Advancement and Support of Education, Commission on Alumni Administration Survey, Fall 1990

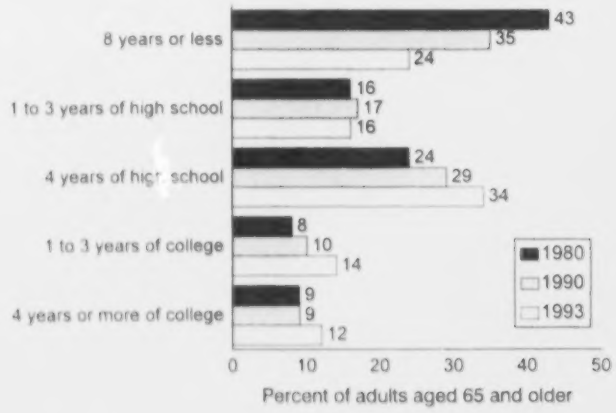
programs for adults of retirement-age are popular and numerous

Programs for adults of retirement age are growing in response to the increase in the 65-and-older population. Programs for adults of retirement age take several forms. Many colleges and universities have developed centers for learning in retirement, which are residential programs for adults that usually last several weeks. Today, there are more than 160 such centers at the nation's colleges and universities serving thousands of adults of retirement age each year. Programs in history and computers are among the most popular offerings.

In addition, during the 1994-95 year, 1,900 institutions offered Elderhostel-approved programs, usually lasting one week, to adults of retirement age in the United States and Canada. Sixty percent of these programs are housed at colleges and universities. These programs registered more than 295,000 enrollments last year. Elderhostel also sponsors overseas travel programs for Americans of retirement age, generally two- to three-weeks in duration.

The percentage of adults aged 65 and older with a college degree has been steadily increasing, from 7 percent in 1980 to 9 percent in 1993. By the year 2000, 12 percent of adults 65 years of age and older will have earned college degrees.

educational level of older adults
(years of school completed by adults 65 and older)



Source: U.S Bureau of the Census, Current Population Reports P20, no. 450

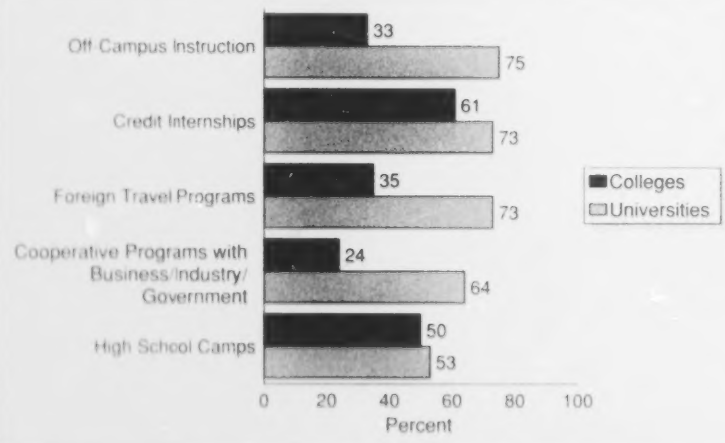
summer schools provide year-round continuing education opportunities

It is estimated that between 2,200 and 2,800—more than 60 percent—of all accredited, degree-granting institutions offer summer school courses and programs. Summer schools give part-time students an opportunity to attend college throughout the year and to accelerate progress toward a degree. Summer session college and university enrollments have increased steadily over the past several years, according to reports from a number of associations representing summer schools.

Summer school enrollments have been increasing for several important reasons and are expected to continue to increase:

- Students use summer school to accelerate their degree studies in order to lessen economic pressures.
- Summer schools help institutions defray their operating costs by allowing them to use facilities year-round.
- Summer schools provide students with greater flexibility and access to courses that are not available during the regular school year.
- Intensive Summer Institutes are attracting working professionals who want to acquire a specialized knowledge and/or explore another career.

percentage of institutions offering summer session activities by type



Source: Raymond J. Young and William P. McDougall, *Summer Sessions in Colleges and Universities: Perspectives, Practices, Problems, and Prospects*, distributed by the North American Association of Summer Sessions, 1991

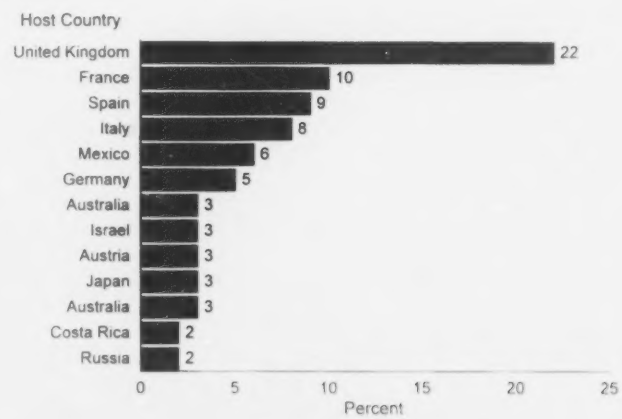
study abroad programs attract increasing numbers of students

During the 1994-95 academic year, more than 76,000 American students studied abroad, representing a 7 percent increase over the past two years. The number of Americans studying abroad has increased steadily since 1985. These students represent less than one-half percent of all students enrolled in U. S. higher education institutions.

While the numbers are growing, relatively few Americans take advantage of the many opportunities for foreign study. As nations' economies become increasingly interdependent, it becomes ever more critical for students to acquire knowledge of foreign languages and cultures. The ability to compete economically is increasingly tied to understanding foreign markets and labor policies.

- The most popular host country for study abroad programs is the United Kingdom.
- Germany and Japan are less popular destinations for U.S. students studying abroad.

leading host countries of U.S. study abroad students: 1994-95



Source: Institute of International Education (New York, NY), *Open Doors: 1994-95*, 1995

JOINING THE INFORMATION AGE

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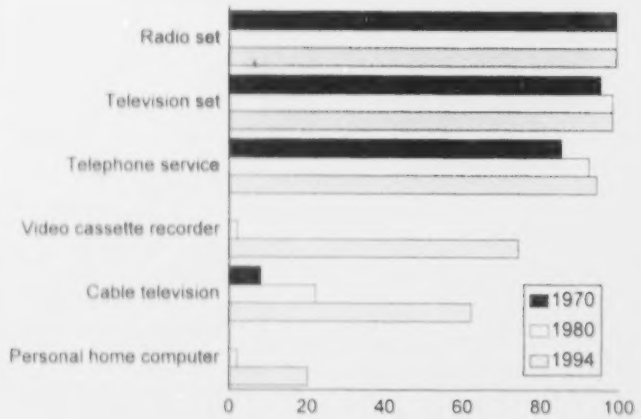
virtually every American home has access to instructional technology

With the continuing development and use of instructional technologies in higher education, more individuals have an opportunity to learn at home. Instructional technologies are most frequently used by individuals who reside some distance from a college campus or who have difficulty traveling regularly to campus for instruction. Most American homes today are technically equipped to receive such educational programs. Such technologies have also increased the number of Americans who telecommute regularly from home, from just under 2 million in 1988 to 8 million in 1993.

- Almost every American home, regardless of income, has a television set.
- Sixty-two percent of homes in 1994 were served by cable television.
- Most homes have telephone service and at least one radio set.
- The penetration rates for video cassette recorders is 74 percent.
- About one in six adults owns a home computer and 3 million plug-in CD-ROM drives for personal computers were purchased during 1992.

percentage of households with access to information technologies: 1970, 1980 and 1994



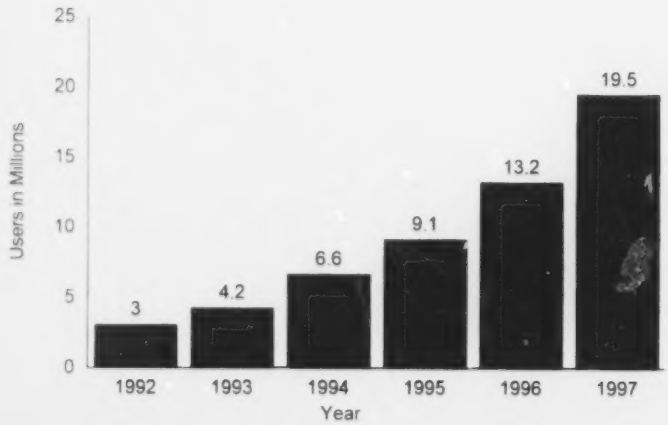
Source: U.S. Bureau of the Census, *Statistical Abstract of the U.S.* (1995 Edition), table no. 897, and Statistical Brief SB/91-11

data networks are affording more Americans access to information

The explosion of data and information networks in the United States and across the globe is connecting people together and allowing an exchange of ideas, information, and data in real-time. Internet, a global collection of more than 12,000 computer networks from over 40 countries, is enabling millions of Americans to travel the information highways. Users can gain access to Internet through more than 900 publicly accessible sites across the country. Internet is helping to change the way Americans work and learn, allowing them to access information networks, digital libraries, college and universities, governments, businesses and other firms. As of 1995, it was estimated that Internet was growing at a rate of 10 to 15 percent monthly.

- In 1994, the number of multi-media personal computers in American homes was estimated to be just under 4 million; by 1997, almost 11 million such computers are expected to be in American homes.
- Online information users in North America more than doubled between 1992 and 1994, increasing from 3 million in 1992, to 6.6 million in 1994. By 1997, users are expected to number nearly 20 million.

estimated and predicted growth of online information users in North America: 1992-1997



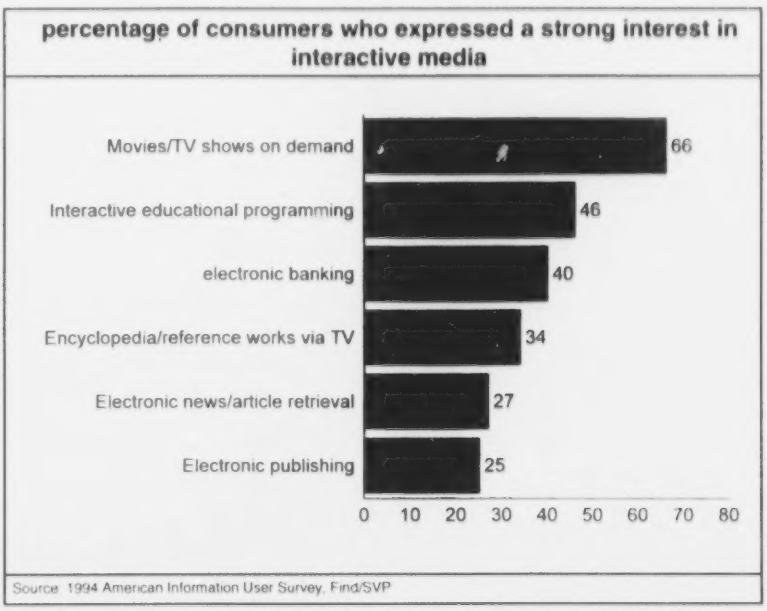
Source: Forrester Research, Inc. as quoted in *The Wall Street Journal*, March 21, 1994

demand for information services growing

The information age has caught on with many Americans, who are demanding more information services online and are willing to spend more to access such services. With the explosion in sales of multimedia personal computers, equipped with CD-ROM players, soundboards, faster modems, and software packages that include popular online services, more Americans are consuming and demanding newer, state-of-the-art interactive media.

Interest in online information services is helping to propel the growth of distance education programs offered by continuing education divisions of colleges and universities. Many institutions are putting degree programs online and finding ways to reach new potential student populations through the power of the Internet.

- According to a 1994 survey, 46 percent of U.S. consumers prefer interactive educational programs over all other interactive media.
- Thirty-four percent of consumers favor access to encyclopedia and reference works via their television sets.
- Some 27 percent express interest in electrônic news and article retrieval services.
- Twenty-five percent of consumers are interested in electronic publishing.



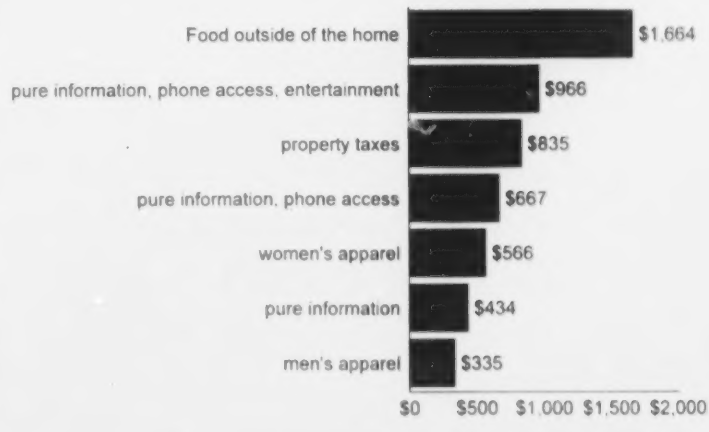
Americans are spending more on information services each year

American households are spending almost as much money on information services as they do for apparel each year. This growing "information consumerism" has made the computer and software industry one of the fastest growing enterprises worldwide. Since its introduction more than a decade ago, the personal computer has given individuals the opportunity to explore the Internet and experience the world of online information services. As a result, annual household spending on such services is increasing, both in real dollars terms and as a proportion of total household spending on all goods and services.

With more households adding access to information services and electronic hardware, the potential of distance education to "penetrate" homes is increasing. Frequently, college and university continuing education divisions are putting their catalogues and courses on the Internet, and, as a result, interest in distance education is growing.

- American households spend on average $434 a year for "pure information" (newspapers, magazines, reference books, basis cable television, non-entertainment pre-recorded video cassettes, and online information services).
- When the costs for telephone access and electronic entertainment are factored in, Americans spend more than $966 annually, second only to expenditures for food outside the home.
- Average annual spending on women's apparel is $566, and $335 for men's apparel.

spending on information compared with other expenses (average annual household spending)



Source: 1994 American Information User Survey, Find/SVP; 1993 Consumer Expenditure Survey, Bureau of Labor Statistics

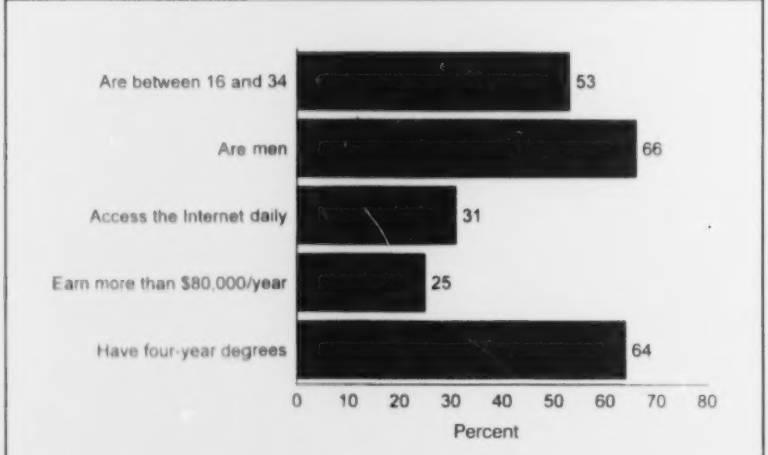
majority of Internet users are young and college-educated

While Internet usage continues to increase and is being accessed more frequently by people from all walks of life, the majority of the estimated 37 million U.S. and Canadian residents with Internet access are between the ages of 16 and 34 and are college-educated. Internet users in the United States and Canada constitute some 17 percent of the total population 16 years of age and older in both countries. Internet usage is estimated to grow by 15 percent each month.

The demographics of regular Internet uses closely parallel those of continuing education students nationally. It is reasonable to assume that the demand for online courses and degree programs will increase as a function of regular Internet usage. Demand may be especially large among younger Internet users (16-to-34 years of age) where career and personal transitions occur more frequently. Such demand suggests that the "virtual university" may increase in popularity among a proportion of the population accustomed to accessing information electronically.

- Fifty-three percent of regular Internet users are between the ages of 16 and 34; 66 percent are men.
- More than 31 percent of Internet users log on daily, spending an average of five hours and 28 minutes online each week.
- One-quarter of World Wide Web users earn over $80,000 annually, and 64 percent have at least a four-year college degree.
- Thirty six percent of Asian households and twenty-eight percent of white households own computers. Only 12 percent of Hispanic and 9.5 percent of African American households own PCs.

characteristics of regular Internet users: U.S. and Canadian residents age 16 and older



Source: Nielsen Media Research for CommerceNet

more public schools are linking to the Internet

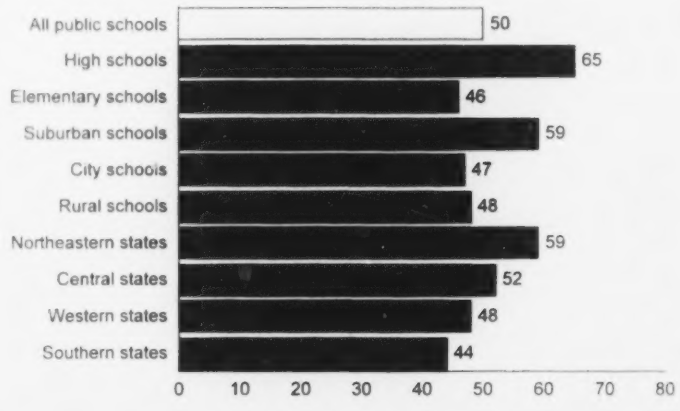
More than half of the nation's public K-12 schools are hooked up to the Internet. While bigger and wealthier school districts lead the way, those that serve primarily minority and inner city school children are also gaining access to the information superhighway, but at a slower pace. Despite the increase in the number of schools linked to the Internet, only an estimated 9 percent of classrooms are equipped to access information online, but this percentage is growing rapidly as more states place increasing emphasis on "wiring" the nation's public schools.

While Internet usage varies from school district to school district, region to region, and from large to small schools, more young people are learning to explore the Internet and are accustomed to the world of online information services. As the number of high school graduates is projected to increase through the next decade, so is the number of young adults with computer and electronic information retrieval skills.

Because more high school graduates go on to college, higher education institutions will see increased demand for electronic courses and degree programs. Because few states can afford to build new higher education institutions to accommodate the projected growth in college-bound adults, distance education may become more critical in serving students by expanding the reach of existing state higher education institutions.

- Forty percent of public schools where minorities comprise more than half of the student body have access to the Internet.

percentage of public schools by type and location with Internet access: 1995



Source: National Center for Education Statistics, Status of Advanced Telecommunications in the Nation's K-12 Public Schools

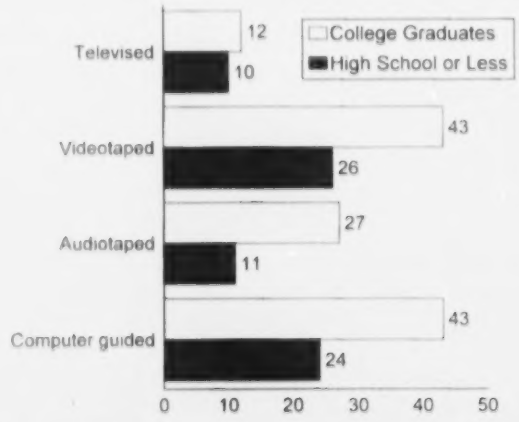
more adults use distance education for continuing education

While the majority of American adults still prefer the traditional college classroom, some 29 percent prefer distance education to access work-related continuing education. With more adults having access to one or more information technologies at home or through work, distance education courses often constitute an appealing alternative for working adults with career and family responsibilities.

Increasing numbers of colleges and universities are linking with businesses to provide on-site continuing education courses to busy employees. Many employers are "outsourcing" their education and training functions, and are relying more on higher education institutions to provide contract programs to their employees. In some cases, corporations contract with a university to provide on-site distance education to multiple levels of employees, from basic education to advanced, postdoctoral technical workshops.

- Some 12 percent of college graduates and 10 percent of adults without postsecondary education use television to access work-related continuing education.
- Forty-three percent of college graduates and 26 percent of adults without postsecondary education access video-taped courses.
- Some 27 percent of college graduates and 11 percent of adults without postsecondary education access audio-taped courses.
- Forty-three percent of college graduates and 24 percent of adults without postsecondary education access computer-guided or tutorial courses to obtain work-related continuing education.

percentage of adults receiving work-based education by media type and educational level: 1995



Source: SESRC, Washington State University, What the Public Wants from Higher Education: Workforce Implications from a 1995 National Survey, #95-52

majority of public universities offer distance education

The percentage of higher education institutions offering for-credit, technology-based distanced education courses is increasing, yet discrepancies exist among different categories of institutions. Public doctoral universities offer, on average, far more for-credit distance education courses than all other types of higher education institutions. Overall, one-quarter of all nonprofit higher education institutions offer for-credit distance education at the undergraduate and/or graduate-level.

While the number of institutions offering for-credit distance education courses is increasing, only an estimated 3 percent of students enrolled in postsecondary institutions participate in distance education programs. About 7 percent of institutional faculty are actively involved in distance education courses. The majority of distance education now involves technology-based or electronic media. Fewer colleges and universities (7 percent) offer print-based correspondence courses, with technology-based distance education courses having overtaken print-based as the medium of choice by student in most higher education institutions.

- In 1993, 69 percent of public doctoral universities offered credit, technology-based distance education courses; 54 percent were at the undergraduate level and 57 percent at the graduate level.
- By contrast, 41 percent of public comprehensive institutions offered credit distance education, and only 35 percent of public two-year institutions.
- Only 7 percent of private institutions offered credit courses via distance education.

percentage of institutions offering credit, technology-based distance education course during fall 1993 term

	Public Doctoral	Public Comp.	Public 2-Year	All Private Inst.	All Inst.
Any credit course	69	41	35	7	25
Undergrad courses	54	37	34	5	23
Graduate courses	57	22	3	3	9

Source: SRI International; *1994 Study of Communications Technology in Higher Education*, May 1995

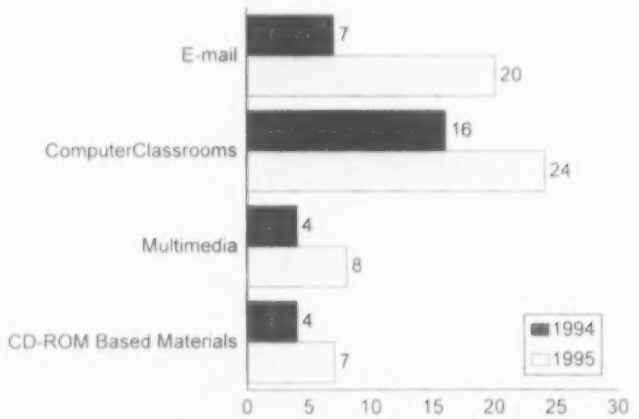
more professors integrate technology in their teaching

The number of college and university faculty who use technology to complement teaching has been increasing during the past several years. An estimated 24 percent of classes are being held in computer-equipped classrooms. Twenty percent of courses now using electronic mail as the preferred mode of communications, an illustration of the growing power of the Internet.

The increase in the number of faculty using technology, both in the classroom and for teaching at a distance, reflects the interest on the part of academic departments across the campus to apply new technologies to teaching. The increase in the number of laptop computers, user-friendly software programs, and browsers used to access the World Wide Web is inducing more faculty to join the information age. While technology usage among faculty is increasing, only an estimated 7 percent of faculty are actively engaged in distance education courses. Given the sharp increase in the number of faculty using technology and in the growing percentage of college-age individuals using computers at work, home, or while in school, the number of college and university courses relying on various electronic media is estimated to rise.

- Nearly one-quarter of all college and university courses are held in computer classrooms.
- An estimated 25 percent of all institutions, 15 percent of public universities, and one-third of private universities plan to use the World Wide Web for instruction.
- Twenty percent of courses use electronic mail to enhance student-faculty communications.
- Almost 10 percent of courses use multimedia or CD-ROM-based instructional materials.

percentage of courses using technology by type



Source: Campus Computing (Encino, CA), *Campus Computing, 1995*

growing numbers of older adults use computer networks

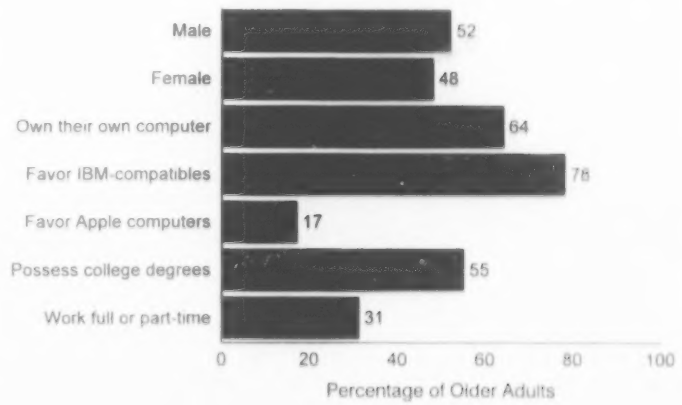
Computer courses are among the most popular offerings at college and university centers for adults of retirement age and the number of Americans aged 50 and older learning to use computers and computer networks is growing. Membership in SeniorNet, a nonprofit organization helping older adults to access the world of personal computers, has grown by more than 3,000 percent since 1983. More than 10,000 older adults currently participate in the organization through more than 75 learning centers across the country, a growing number of which are on the local college or university campus.

Older adults are finding computers and access to the Internet an indispensable way to keep in touch with family and friends, pursue hobbies, and learn new skills for work, volunteer and social activities. Word processing is the most popular computer application for older adults at 57 percent of users, followed by managing personal and household finances at 33 percent, telecommunications at 25 percent, managing businesses at 22 percent, and pursuing hobbies at 21 percent.

Older women appear to have a stronger interest in computer networking than the female population at large. Some 48 percent of SeniorNet members are women, meanwhile only 34 percent of all Internet users age 16-and-older are women.

- Sixty-four percent of SeniorNet members own their own computers: IBM-compatibles are most popular at 78 percent; 17 percent use Apple computers.
- College-educated older adults comprise 55 percent of SeniorNet computer users.
- 31 percent of SeniorNet members work full or part-time.

characteristics of adults aged 50 and older using computers



Source: SeniorNet (San Francisco, CA), *Portraits of Computer-Using Seniors*

GLOSSARY

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G L O S S A R Y

academic year

The yearly period used by colleges and universities to measure a full-year of academic study, typically commencing in early autumn and ending in late summer.

associate degree

A degree awarded upon the successful completion of a pre-baccalaureate level program, usually consisting of two years of full-time study at the college level.

audioconference

Electronic meeting in which participants in different locations using telephones or speakerphones are linked together by audiobridge and communicate interactively in real-time.

baccalaureate

Degree conferred upon completion of a four-year course of study at undergraduate level.

bachelor's degree

A degree awarded upon the successful completion of a baccalaureate-level program, consisting of four years of full-time study at the college level.

CD-ROM

Acronym for compact disc read-only memory, an optical storage system for computers that allows vast amounts of data, text, and images to be stored and retrieved off a CD.

certificate

An educational credential awarded upon completion of a structured curriculum, typically including several courses but lasting for a period less than that required for a degree. Credit awarded upon the completion of a certificate program is generally applicable to degree credit.

college

A postsecondary-level institution that offers programs of study leading to an associate's, bachelor's, master's, doctoral, or professional degree. Colleges may be either two- or four-year institutions.

correspondence study

Individual or self-guided study by mail from a college or university by which credit is typically granted through written assignments and proctored examinations.

credit

A unit of value assigned by colleges or universities upon the successful completion of courses. Credits measure the academic quality of a course in relation to a program of study and measure the progress toward a specified degree program.

G L O S S A R Y

CLEP

Acronym for College-Level Examination Program, administered by The College Board, that tests students' general knowledge and subject mastery in order to award college-level credit for non-collegiate learning.

computer conference

Computer-facilitated communication among members of a group, where all messages are seen by all participants.

compressed video

Process by which video images are captured and transmitted/stored more efficiently and at lower cost than traditional broadcast video, with the result that the video information can be sent via phone lines or stored on compact disc.

continuing higher education

Programs or courses offered by colleges and universities at the pre- or post-baccalaureate levels to students with at least a high school diploma or its equivalent attending on a less-than-full-time basis. Study can be for credit or non-credit, degree or non-degree, certificate or some other generally recognized educational credential.

distance education

A term describing the delivery of educational programs to off-site students using one or more technologies such as cable television, video/audio tapes, fax, computer modem and/or other methods of delivery.

doctoral degree

The highest degree awarded upon the demonstrated mastery of a subject, including the ability to perform scholarly research. Generally, a master's degree serves as a prerequisite to obtaining a doctorate.

educational attainment

The highest level of education obtained, or the highest level of school attended.

elementary and secondary schools

Schools below the postsecondary level that are a part of state or local school systems, non-profit private schools, and religiously-affiliated schools offering programs from the kindergarten to senior high school level.

enrollment

Total number of students officially participating in a given program or institution at a particular time.

experiential learning

Portfolio of skills and life experiences that may be converted to academic credit by colleges and universities, either by examination or evaluation.

first-professional degree

A degree awarded upon the successful completion of program of study for which a bachelor's degree is normally the prerequisite, and which prepares a student for a specific profession.

fiscal year

The yearly accounting period for the federal government, commencing on October 1 and ending September 30.

GED

Acronym for General Educational Development program, or academic instruction to prepare an individual to obtain a high school equivalency diploma.

full-time enrollment

The number of students enrolled in higher education courses whose total credit-load usually equal at least 75 percent of the normal full-time load specified by the institution.

graduate

An individual who has successfully completed a specified educational program.

higher education

Study beyond the secondary level at institutions offering degree programs.

higher education institution

An institution legally authorized to offer programs at the two- or four-year level for credit and offering degrees. A university is a four-year institution offering degree programs beyond the baccalaureate level. A college may be an institution at the two- or four-year level.

the Internet

Increasingly popular global network of more than 12,000 computer networks that allow computer conferencing, networking and access to databases from an estimated 3,200 "new groups" or "listservs" representing various professions, interests and hobbies. It is accessible from anywhere in the world provided the user has a computer, telephone, modem and appropriate software package. Commercial online services, colleges and universities, and many public libraries and K-12 schools now provide access to the Internet.

labor force

Individuals 16 years of age or older who are employed as civilians or who are actively looking for employment.

master's degree

A degree awarded upon the successful completion of a program of study beyond the baccalaureate level, typically requiring one or two years of full-time study.

part-time enrollment

The number of students enrolled in higher education courses whose total credit-load is less than 75 percent of the full-time load as specified by the institution.

post-baccalaureate enrollment

The number of graduate-level and first-professional students enrolled in higher education courses leading to advanced degrees.

postsecondary education

Courses or programs of study offered to students who have completed high school degrees or the equivalent. These include programs of an academic, vocational or continuing education nature.

telecourse

A course students can take from home, in which they listen to lectures distributed via broadcast or cable television and study accompanying print materials.

unclassified students

Students who are not candidates for degrees or other recognized educational credentials but who are taking courses at higher education institutions for credit.

undergraduate students

Students matriculated at a higher education institution who are working toward baccalaureate or associate's degrees.

university

A four-year institution of higher education offering degrees at the baccalaureate, master's, doctoral or first-professional levels.

videoconference

Typically, one-way video and two-way audio transmission conducted via satellite; that is, audience members can see and hear the instructor, who can hear but not see them. Two-way video, which requires camera equipment at both sites, allows the instructor to also see the audience.

World Wide Web

High speed, graphical interface for the Internet which permits real-time video, sound, and sophisticated graphics to be transmitted to the user. A broad and growing number of institutions are creating "home pages" on the Web as a source of public information and as a opportunity to market products and services to Internet users.

workforce

Typically defined as those individuals aged 16 years and older employed full-time, full-year in the civilian labor force.

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